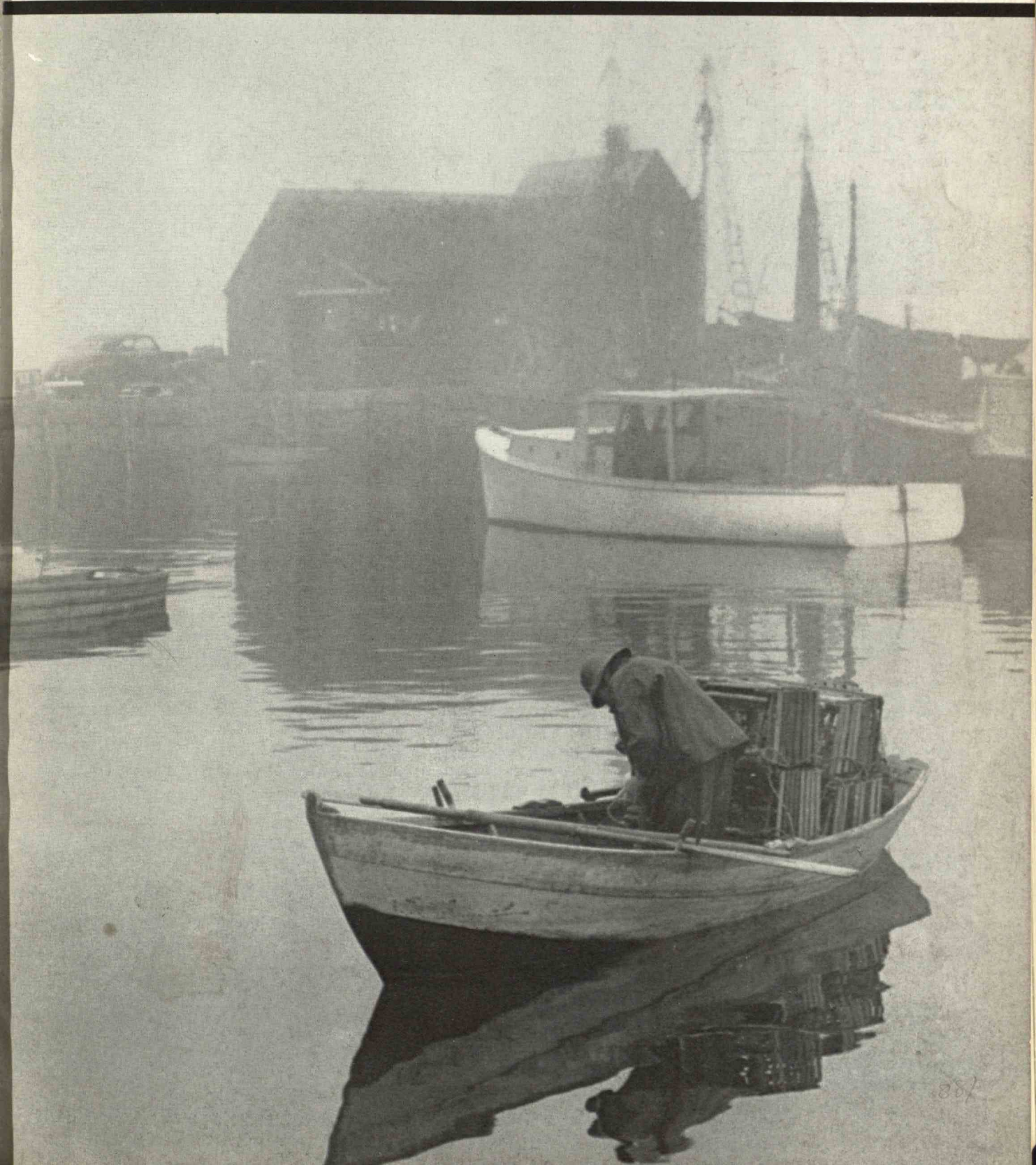


TECHNOLOGY

REVIEW *November* 1953

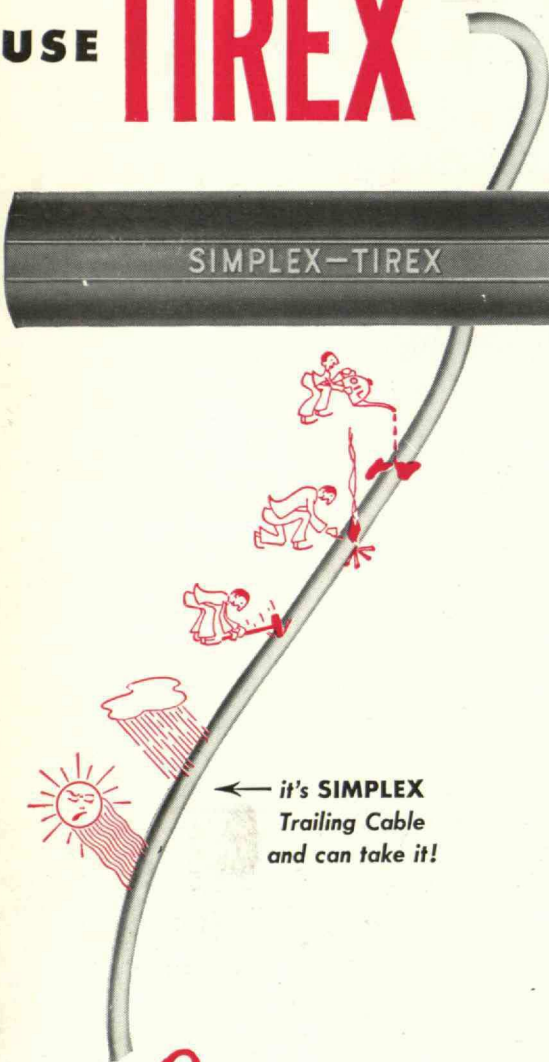


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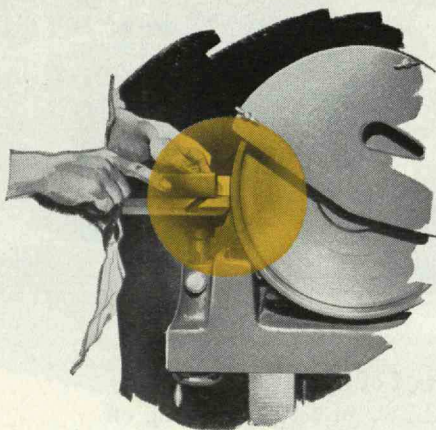
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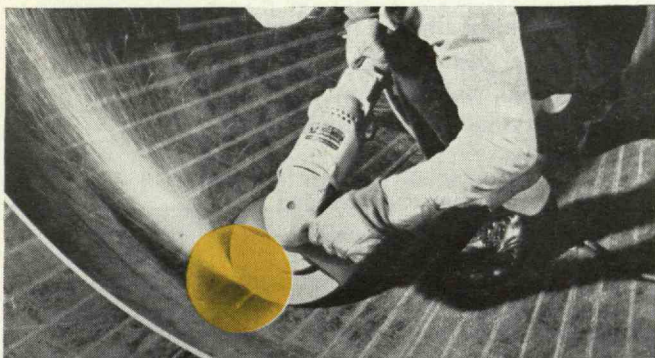


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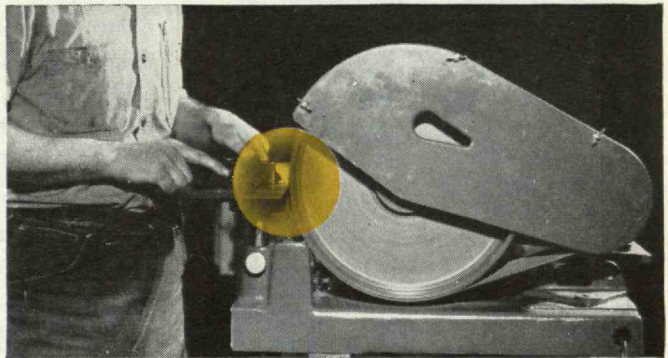
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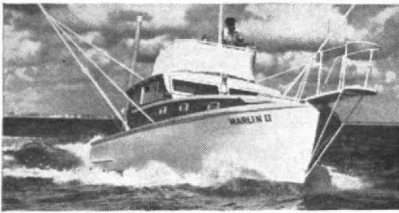
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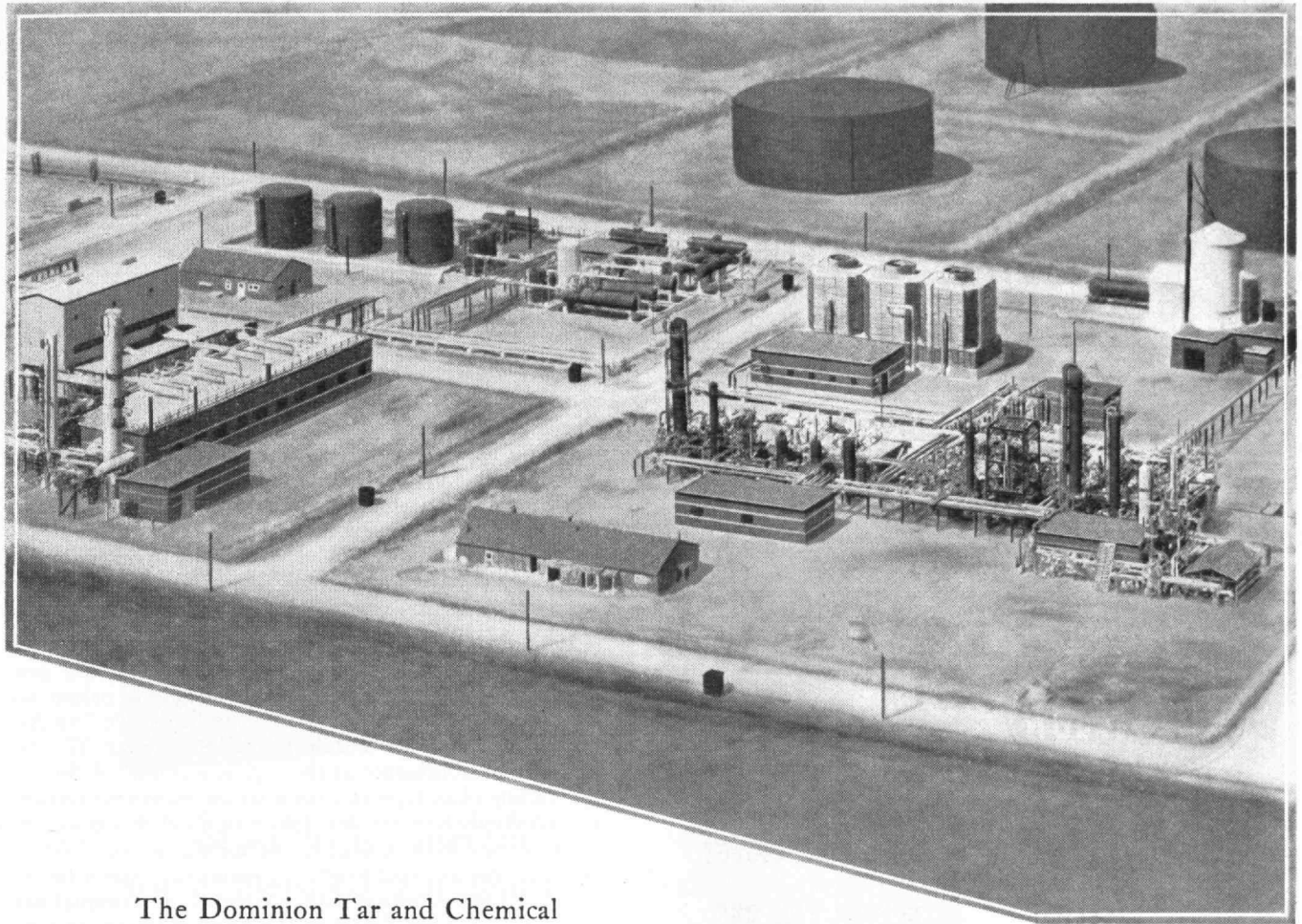
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The Dominion Tar and Chemical Company's new plant at Montreal produces ethylene oxide, a component of detergents, solvents and plastics; and glycol, basic chemical in permanent type anti-freeze, explosives and synthetic fibers.

Design and construction of the plant, which has an estimated capacity of 25 million pounds of glycol per year, were by Stone & Webster Canada Limited, utilizing the facilities of Badger Process Division of Stone & Webster Engineering Corporation.

At this plant, located near the St. Lawrence River, Dominion Tar and Chemical Company extracts ethylene from gas piped from nearby refineries, converts it to form ethylene oxide and glycol, and returns the unused gas for further processing.



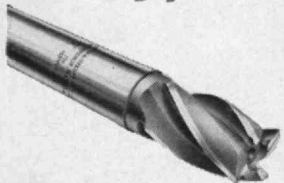
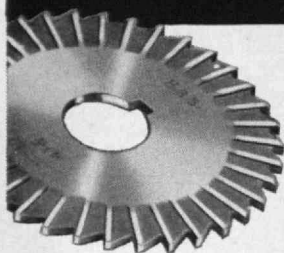
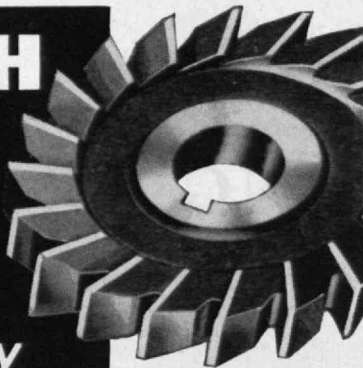
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THE TABULAR VIEW

Human Equation. — As the educational doors fling wide again at the beginning of the fall term, ADMIRAL BEN MOREELL opens Volume 56 of *The Review* with his article appropriately bearing the title "Engineers and Engineering Education" (page 15). Admiral Moreell finds those who leave engineering schools to be well taught in the technical topics of their profession. But engineers must deal with people as well as with materials and ideas, and collegiate instruction on the engineers' responsibilities to their fellow man have left something to be desired. Recalling that the signers of the Declaration of Independence regarded that government best which left as much freedom as possible to the individual, Admiral Moreell warns of unrestrained bureaucracy and stresses the need to instruct engineers in the functions of government as well as in their obligations to society at large. Admiral Moreell, chairman of the Board of Jones and Laughlin Steel Corporation received a degree in civil engineering from Washington University in St. Louis in 1913. After four years' experience on construction projects in St. Louis, he started his naval career, advanced to the position of Chief of the Bureau of Yards and Docks (1937-1945), and became the Navy's youngest vice-admiral at the age of 51. He is the recipient of the Distinguished Service Medal, the Legion of Merit, membership in honorary scientific and engineering societies, and honorary doctor's degrees from 10 universities. Through the good auspices of the M.I.T. Club of Western Pennsylvania, *The Review* is able to include this article which Admiral Moreell delivered as a speech to the Pittsburgh group last May.

Individuality Is a Horrid Word. — The modern characteristics of that segment of our society that has generally been regarded as the backbone of the nation are examined by JULIAN A. JOFFE, '24, in his article "An Appraisal of Suburban Middle Class Life" (page 17). Selecting the suburbanite as the typical example of the upper-middle class type of citizen whose economic security is exceedingly tenuous, Mr. Joffe's study of this group decries the ostentatious display, the indulgence of children, and the uniform conformity to mediocrity which he observes. As the populace blithely accepts, as a normal part of their lives, such things as the leveling effects of mass communication, compulsory social-security laws, low-cost housing at public expense, and progressively high taxes that increasingly diminish personal incentive, Mr. Joffe sees a metamorphosis taking place in the Americanism that once venerated individualism. Recipient of the B.S. degree from the College of the City of New York in 1922 and the S.B. from M.I.T. in 1924, Mr. Joffe took graduate study at the New School of Social Sciences. As a partner in a firm making food products in Mount Vernon, N.Y., he speaks with the experience of a business executive. Supplementing his business activities, Mr. Joffe, a previous contributor to *The Review*, has been engaged in studying and promoting educational and civic enterprises in his community.

More Laurels to Win. — The dairy industry may take justifiable pride in the many technological innovations for which it has been responsible, especially during the past half century. Its laurels are not of the past, however, for this basic industry has ample opportunity to make major contributions in providing an adequate food supply for the world's increasing population. Major progress may be expected from increasing the basic yield of milk per cow, (Concluded on page 6)

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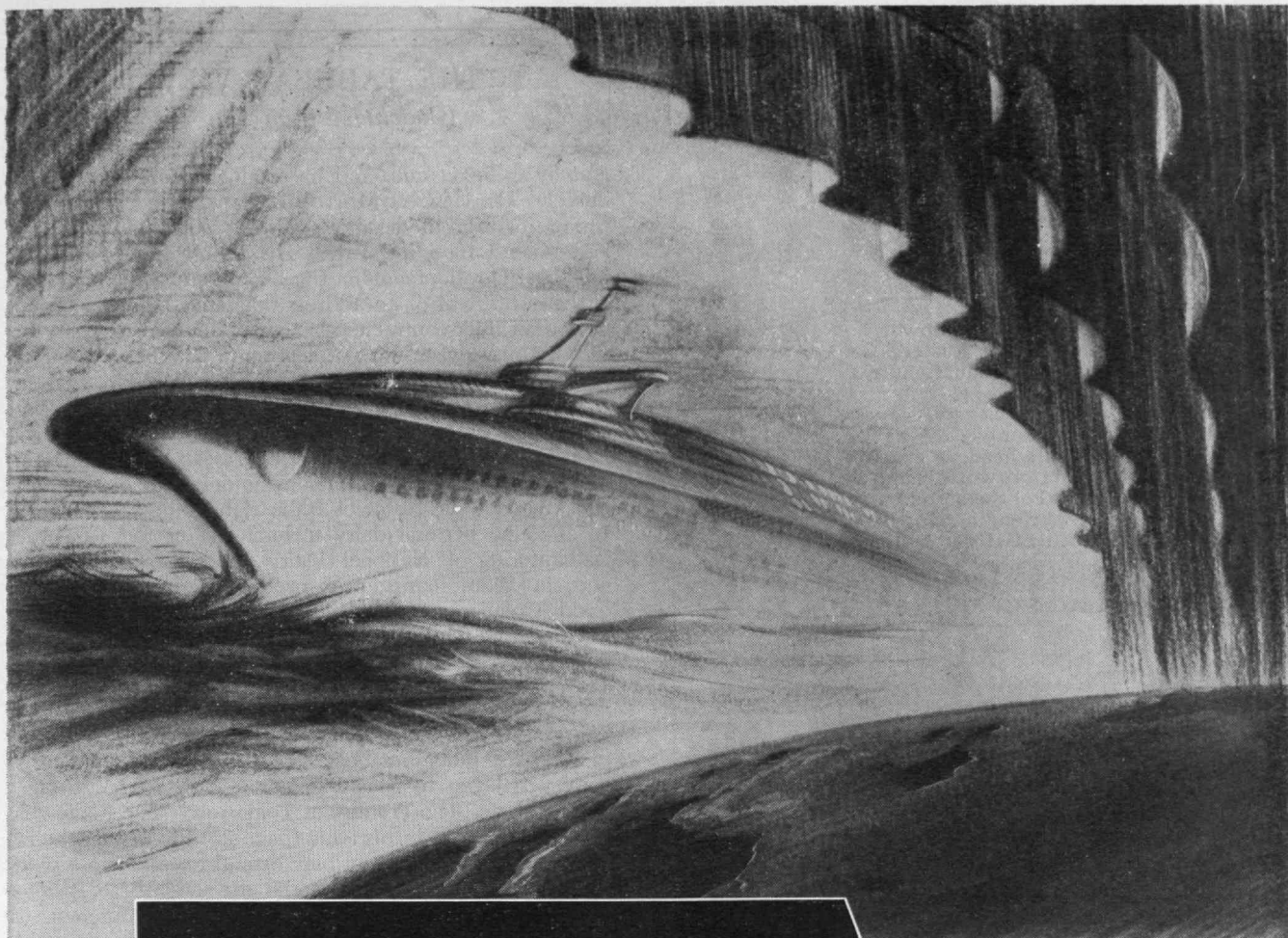
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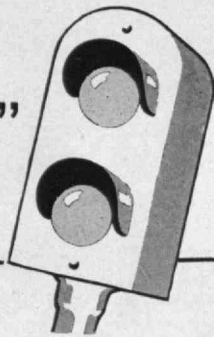
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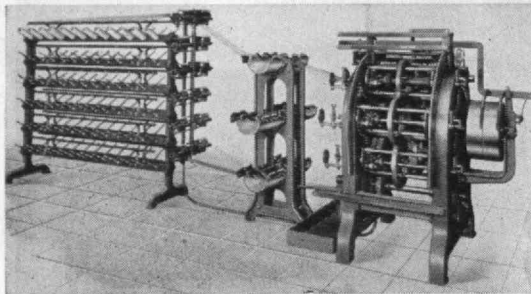
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THE TABULAR VIEW (Concluded from page 4)

and by utilizing milk and its products more effectively. Such are the views of MILTON E. PARKER, '23, whose entire professional life has been closely associated with dairy and related food industries. His article "Future Technological Developments in the Dairy Industry" (page 22) is the outgrowth of an address delivered before a group of market milk contractors last April at the University of Illinois, and revised for publication in *The Review*. After receiving the S.B. degree in Industrial Biology from M.I.T. in 1923, Mr. Parker was engaged in a wide variety of research and quality-control projects in the dairy industry, serving for a year as research associate in M.I.T.'s Department of Biology under Samuel C. Prescott, '94 (now Professor of Industrial Biology, Emeritus). In 1928 he became dairy technologist of the Research Laboratories of National Dairy Products Corporation, and, in 1936, manager of production of the Beatrice Foods Company. In 1944 he opened an office in Chicago as consulting food engineer, and in 1948 organized a Department of Food Engineering at the Illinois Institute of Technology, which he now heads.

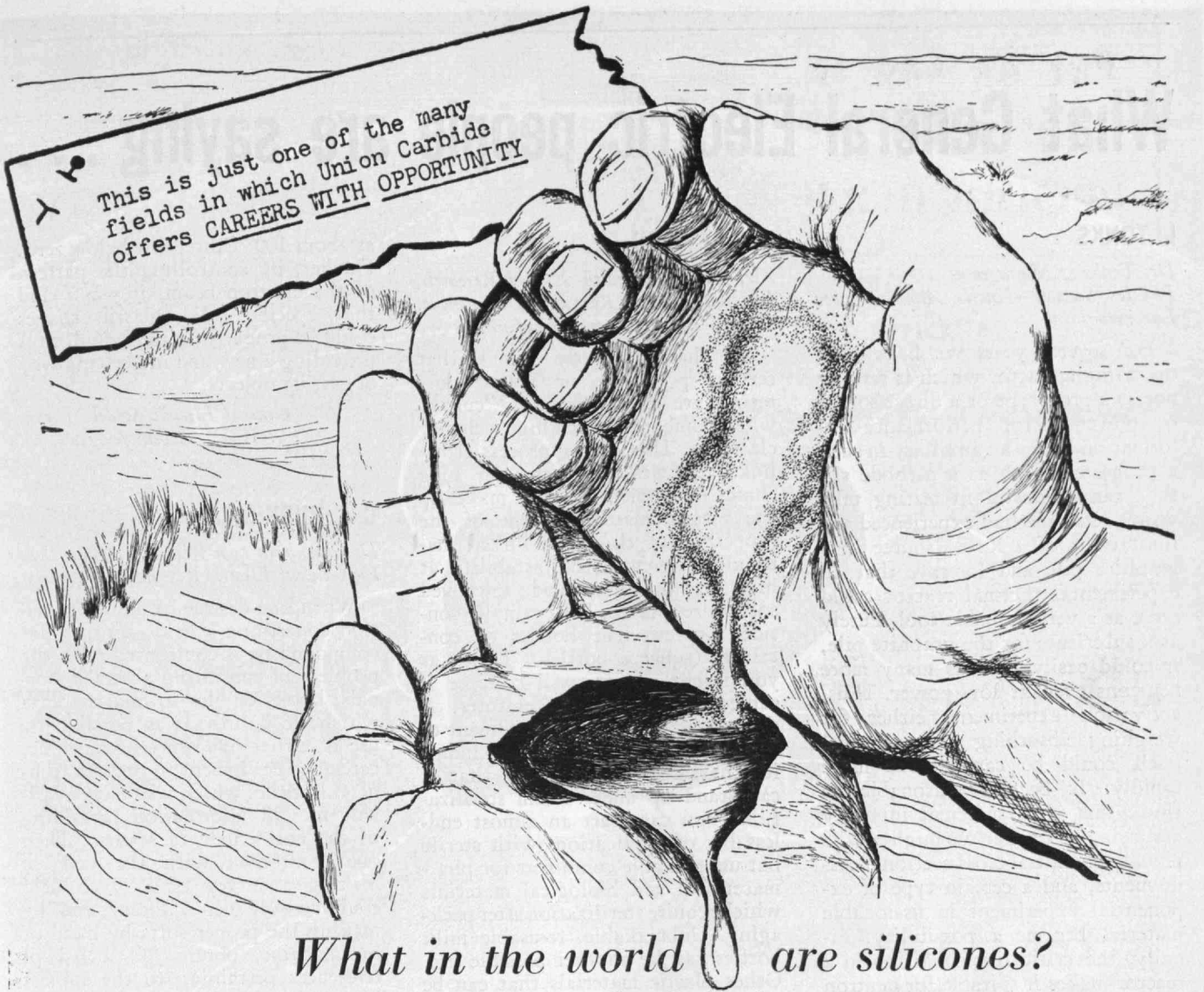
Promises Unfolding. — At the 25th reunion of the Class of 1928 last June, members of that Class and their guests were privileged to hear PROFESSOR ERWIN H. SCHELL, '12, speak on "The Promise of Tomorrow." The Review is happy to include in this issue (page 25) Professor Schell's address so that its content may extend beyond those who were present in Walker Memorial at reunion time. A continuing personal growth, Professor Schell contends, is achieved when we begin to delegate our activities to others, thus multiplying our energies and accomplishments; when we contribute sheerly for the pleasure of giving; when we develop greater loyalties to others. Professor Schell believes that, by learning the application of these arts of delegation and of greater endeavor one's stature inevitably increases and one's worth is enhanced. Professor Schell is a graduate of M.I.T. and received the S.B. degree in Mechanical Engineering in 1912. A member of the Institute's teaching family since 1917, he is now professor of industrial management, and in charge of the Course in Business and Engineering Administration.



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What General Electric people are saying . . .

L. TONKS

*Dr. Tonks is Manager—
Physics Section—Knolls Atomic Power
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For several years we have been operating a reactor which is serving not as a prototype or a direct source of power-reactor performance information but as an auxiliary in such a program—much as a cathode ray tube can be useful in testing television sets. We had experienced the limitations of a Ra-Be source in a graphite pile and foresaw that an experimental thermal reactor could serve as a very valuable tool. Purely as a substitute for the graphite pile, it could easily give us many more neutrons even at low power. Thus, activation experiments either for weighing absorbing foils or fuel itself could be carried out more rapidly. It became reasonable to think that with sufficient intensity and using a chopper we might make actual differential cross-section measurements, and a certain type of exponential experiment in fissionable material became a possibility. Finally, the criticality condition in a reactor makes it suitable for neutron absorption measurements by observing the effect of the material under test on reactivity.

These were the considerations that led us to build our first thermal test reactor based on the fundamental design of Dr. Steward of this Laboratory . . .

Our thermal test reactor has undergone a logical evolution in accordance with its proved usefulness. From a small beginning with a power level of one watt, all-manual controls, makeshift shielding and borrowed fuel, it has justified development into the 10,000-times-more powerful reactor we are about to complete. It is still small as reactors go and yet can give thermal neutron fluxes for experimental purposes which are comparable with far larger units. And by exploiting danger coefficient techniques it can measure thermal capture cross sections of small samples and weigh isotopes.

*at the American Physical Society,
Rochester, N. Y.*

E. J. LAWTON

*Mr. Lawton is with X-Ray Research,
Electron Physics Research Department,
General Electric Research Laboratory*

We have recently found that certain polymers, or plastic materials are cross-linked or "cured" when bombarded with high-velocity electrons. This curing process cross-links, or ties together, the long chain-like molecules that make up the plastic material. Some of the properties of this cross-linked material are greater form stability at high temperatures and improved solvent resistance. For example, consider polyethylene bottles or containers (squeeze bottles). These, as you might expect, will collapse if subjected to high temperatures. A short time electron bombardment of such a bottle, however, will change its characteristics so much that it can stand up under steam sterilization. You can start an almost endless list of applications with sterile but unbreakable containers for pharmaceutical and biological materials which require sterilization after packaging. Unbreakable, re-usable milk bottles can be another possible use. Other plastic materials that can be cross-linked by the electron beam are nylon, rubber, and silicone products.

In some of our earlier work we found that certain liquid materials would polymerize to solid plastics when exposed to the electron beam. In this process, there is a joining together of many smaller molecules to form the long chain-like molecules that make up the solid plastic. This means of initiating polymerization does not necessitate the use of catalyst and high temperature that is required in the conventional chemical polymerization process. In fact, we found that polymerization could be initiated at temperatures as low

as about 100° Fahrenheit below zero. Further, by controlling the pattern of the electron beam, it was found that specific solid plastic shapes could be produced in the liquid, thus providing a new and interesting way of casting objects.

*General Electric Science Forum
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C. A. BURKHARD

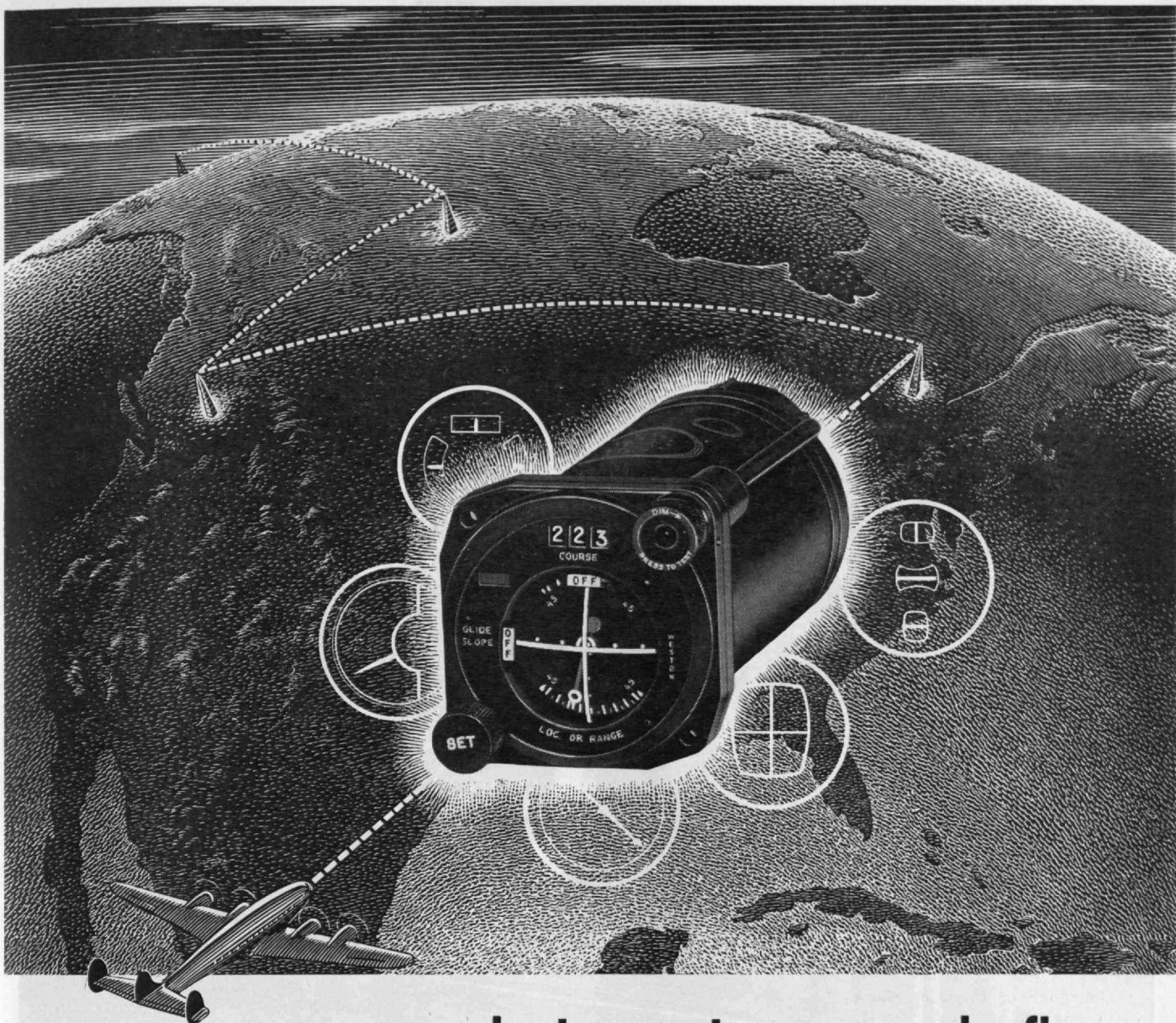
*Dr. Burkhard is a Research Associate at
the General Electric Research Laboratory.*

When one desires to find information concerning a field or particular compound he is confronted with the problem of consulting abstract journals, books or files to find the data which he desires. It is possible by use of either hand-sort or machine-cards and equipment to prepare technical libraries which will have available files of information pertaining to the entire field of science. Then one confronted with the task of making a survey of a given field could consult such a library, and, by making the proper sorts by hand or by machine, obtain (1) a list of references pertaining to the subject in question (2) obtain pertinent data concerning the subject. As an ultimate in this type of activity it would be possible with the machine sort cards to rapidly prepare printed sheets of references, lists of compounds and their physical properties, or lists of materials having certain physical properties. By the use of such type files it would also be possible to correlate and analyze data pertaining to particular research and development problems from time to time without requiring the necessity of using research personnel to conduct such surveys.

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THE TECHNOLOGY REVIEW

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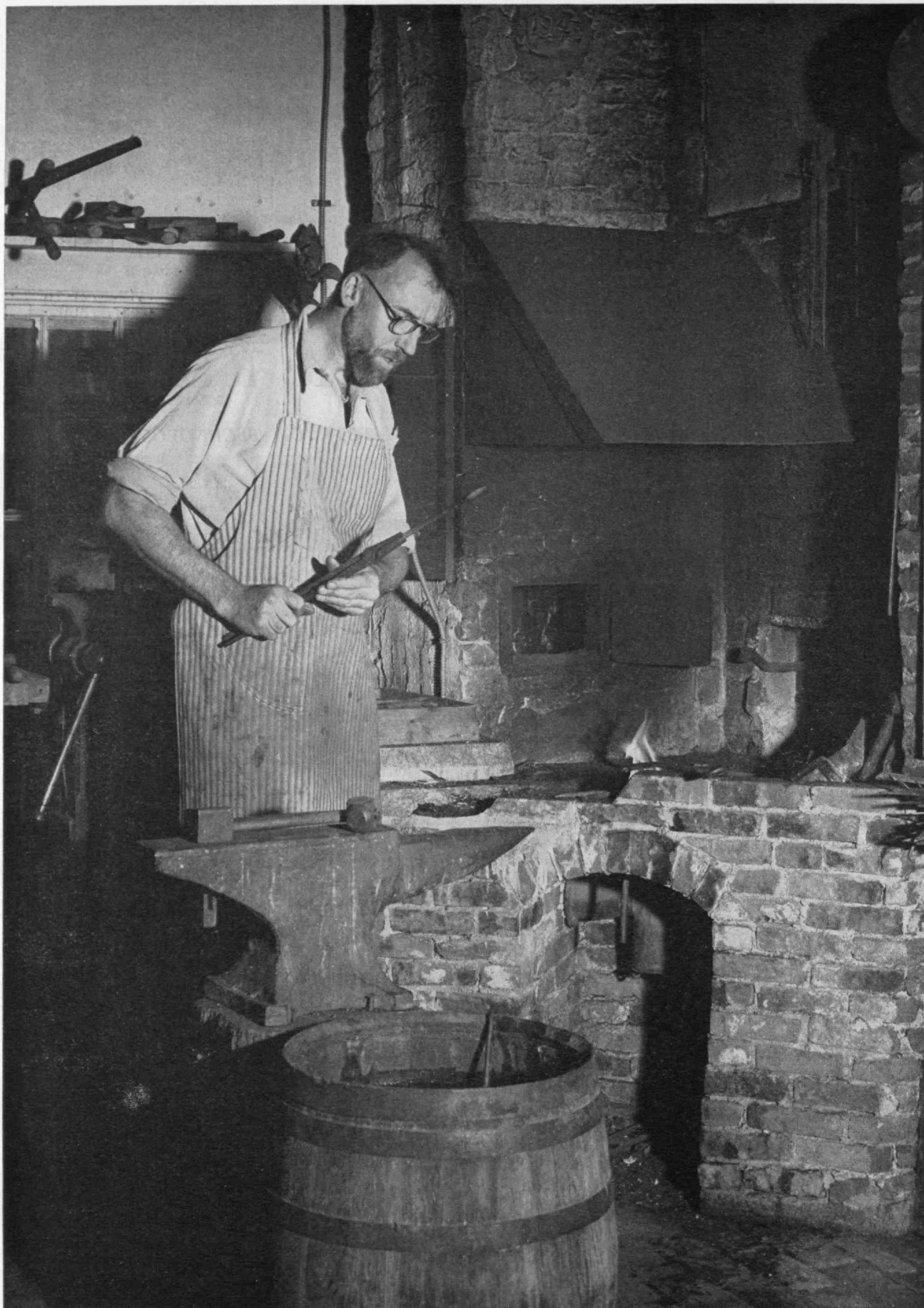
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The Simpler Life

Generations of stonecutters have used the forge in this old shop in Newport, R. I., ever since John Stevens built it in 1705.

THE TECHNOLOGY REVIEW

Vol. 56, No. 1



November, 1953

The Trend of Affairs

Nuclear Sideswipe

RESearch in the physics laboratories at M.I.T. has produced evidence that an actual collision of nuclear particles is not necessary for a nuclear reaction; the particles can react even though they merely brush past each other. Clark Goodman, '40, Associate Professor of Physics, and Clyde L. McClelland, '52, research assistant, believe that this is the first experimental evidence that nuclear projectiles need not score a bull's-eye to cause nuclear reactions. Their results were announced early in August in the *Physical Review*; the work was supported at M.I.T. by the Office of Naval Research and the Navy Bureau of Ships.

In the M.I.T. studies, hydrogen nuclei — called protons — were accelerated by one to two million volts in a Van de Graaff-type electrostatic generator. These fast-moving protons, passing near, but not striking, the nuclei of any of several heavy elements, caused the heavy materials to give off high-energy x-rays.

According to Professor Goodman, the protons had such low energy that they could never get near enough to do more than wave at the heavy metal nuclei — yet they clearly produced high-energy x-rays (called gamma rays) which were measured and counted by a scintillation spectrometer.

"Putting this reaction on the same scale as our solar system," says Dr. Goodman, "it is as though a large meteorite, about half as big as the moon, whizzed by the earth at a distance of about 30,000 miles. The gravitational effect would create enormous wreckage on the earth's surface, even though our planet were never actually struck. In the same way, the electrical effect of our fast-moving protons may be quite large though they never actually strike the nucleus."

Dr. Goodman emphasizes that the new technique offers no promise as a source of nuclear energy. But it does, he believes, open the door a little wider to the secrets of nuclear structure which nature continues to hide so zealously.

Low-energy reactions are of particular interest in physical research because the amount of energy involved is so low that other nuclear effects are impossible. Thus there are no side-effects, and it is relatively easy to study the reactions.

The work reported during the summer is typical of how new findings may come as fortunate, and unexpected, by-products of scientific activities. In research devoted to studying the reactions of one to two million volt protons with chromium and vanadium, the first hint of the new effect came when unpredicted gamma rays appeared during the experiments. The new effect was promptly investigated. It now turns out that tantalum was, under the conditions involved, the ideal metal to demonstrate the new effect. It has since been studied carefully in both tantalum and platinum, and preliminary work has been done with other materials including silver, tungsten, mercury, and bismuth.

Test at Yucca Flat

As knowledge of nuclear power devices spreads through the world, not always into hands we trust, an experiment performed last spring in Nevada becomes grimly pertinent to every householder. Two typical American houses of wood frame construction were erected by the Federal Civil Defense Administration on Yucca Flat and subjected to an atomic bomb blast. In its explosive force this bomb was equivalent to about 15,000 tons of T.N.T., and is thus somewhat smaller than the bombs exploded over Hiroshima and Nagasaki.

One of the houses was positioned 3,500 feet (a little less than three-quarters of a mile) from ground zero. The front of the house, which faced the detonation, was subjected to an estimated pressure of over 1,000 pounds per square foot, or more than 60 times the horizontal pressure that buildings are normally expected to withstand. Within two and one-third seconds after detonation, the house had collapsed into a pile of rubble. However, manikins in wooden basement shelters were not damaged, and the house did not catch fire. Although the intense heat radiation of the explosion charred the front of the house, and caused considerable smoke to be emitted from the decomposed materials, there was no free flaming. Stress was placed on the fact that the house was painted white, and was thus a rather good reflector.

The second house was located 7,500 feet from ground zero. Although considerably damaged and with every window but one broken, it was habitable after the explosion. Except for the darker areas such as the gray shutters, there was no charring of the surfaces exposed to radiation. The basement was free of debris except for broken glass from the cellar windows, and for doors and shutters blown off their hinges at the rear areaway.

If exposed to an atomic bomb blast of the same intensity as that tested at Yucca Flat, therefore, a building directly exposed at 3,500 feet is virtually sure to collapse, but it will not necessarily burn, if painted white. Objects inside the building and subjected to radiation through the windows might catch fire, however. Strong wooden shelters in the basement could be expected to protect people inside from physical injury.

At 7,500 feet from the blast, a well-built frame house would be damaged, but would still remain a house quite suitable for emergency habitation. The radiation should not set the house afire nor should it char white surfaces. Virtually all glass will shatter, and a serious hazard to exposed personnel may be anticipated from this kind of damage.

Germinal

THE origin of the improbable accusations from behind the Iron Curtain, alleging that the United Nations had waged biological warfare in Korea, has now been revealed; repatriated United States aviators have reported that while under captivity they were forced to make concocted "confessions" of having carried out germ warfare attacks. That the United Nations had engaged in germ warfare had, from the outset, seemed improbable for ethical as well as practical reasons. The creation of disease epidemics that could ravage civilian populations is abhorrent to the enlightened democratic mind. Furthermore, even if germ warfare were essayed, there are many technical obstacles to its effective prosecution.

Thus it is extremely difficult to grow disease germs in the immense quantities that would be required for significant use against an enemy. Furthermore, numerous environmental factors tend to destroy germs once they are exposed outside of the body of a host. For example, in the air, ultraviolet radiations from the sun, desiccation and oxidation are all potent destroyers of microbes. In water — a logical vehicle

for biological warfare — no less than eight factors (sedimentation, antibiosis, sunlight, adverse temperatures, scanty food supply, oxidation, osmosis, and bacteriophage) will destroy heavy bacterial contamination, without human intervention, if allowed to act long enough.

But similar theoretical arguments could be — indeed once were — raised against the possibility of an atomic bomb. James A. Tobey, '15, writing in the November, 1952, issue of *The Review** has stated: "Biological warfare is . . . definitely not a myth. It is a distinct possibility in the hands of a resourceful and malefic enemy . . ."

Indeed the possibility of a biological warfare attack on this country is real enough that the United States Public Health Service has provided positive measures of defense. A primary phase of such defense is detection of an attack. Since germ war may be conducted clandestinely, prompt detection is no simple matter. Mere appearance of one of the diseases likely to be employed (botulism, plague, typhus, cholera, smallpox, tularemia, brucellosis, anthrax or glanders) does not necessarily indicate activity of germ warfare saboteurs; for at least scattered cases of these infections may ordinarily appear from time to time. To maintain constant vigilance, the United States Public Health Service, through its Communicable Disease Center, has set up an "Epidemic Intelligence Service." This service provides machinery for the central recording, and quick analysis, of data on disease incidence gathered from all over the country. Through this procedure biological warfare activities, even if done clandestinely, would quickly become apparent. Thus detection has been provided for; what about defense?

The logical defense against attacks or sabotage employing biological warfare agents becomes manifest upon reviewing the list given above of the diseases apt to be so employed. All of these infections come within the purview of control measures regularly exercised by governmental departments of health — local, state, and federal. These health department disease control programs are, of course, basically designed not to combat purposely created epidemics, but rather to forestall outbreaks due to inadvertence or ignorance. Nevertheless, the basic machinery for biological warfare defense stands ready in our existing health departments, and needs merely to be endowed with reserve facilities to cope with possible outbreaks of a suddenness or magnitude ordinarily unknown.

This realization, although reassuring, is no basis for complacency. Some areas of the United States do not have local health departments. Public health officials sometimes encounter difficulties in maintaining adequate peacetime programs, because of insufficient appropriations of funds or the vagaries of political administrations.

Here, then, lies the answer to assurance of adequate defense against biological warfare. Our governmental health departments must receive, from the citizenry they serve, the recognition and support necessary to guarantee adequate peacetime activities, with a staff and facilities able to cope with the exigencies and emergencies of a possible biological warfare attack.

* "Biological Warfare — Menace or Myth?" *The Technology Review*, 55:31-33, 66.

Engineers and Engineering Education

A Plea Is Made for the Evaluation of Engineering Work in Terms of the Effect on Both Our Material As Well As Our Spiritual Standard of Living

By BEN MOREELL

ABOUT 10 years ago I was asked by the chancellor of my alma mater to give him a frank appraisal of the engineering course I had taken, in the light of my experience since leaving school. In reply, I stated that I had no major criticism of the technical instruction. I did suggest that perhaps too much time and effort had been spent in teaching engineering practices which were either already outmoded or which had become so shortly after I left school. I suggested that this time and effort might have been more profitably used to inculcate a better understanding of the basic knowledge on which all of the natural sciences are founded. I stated that on the whole, however, I had found the technical instruction adequate.

My major criticism was directed at the lack of instruction in certain vital areas. I mentioned the fact that not only had we received no instruction in the field of "human relations," but we were not even told that this field was one of utmost importance to all engineers.

Having been through the throes of organizing, recruiting, training, equipping, and directing the activities of an engineering force of some 240,000 enlisted men and 10,000 officers, I could speak with some assurance on the importance of learning how to "handle men," or, expressed in more precise terms, learning how to live, work, and play together with a minimum of friction and a maximum of productivity. I believe that my organization, the Navy Seabees, was probably the largest aggregation of technical engineers ever assembled in one working group. Of the more than 10,000 officers, 80 per cent had one or more college degrees, and a number of the enlisted personnel were also engineering graduates. In addition, many of our most capable and outstanding officers were honor graduates of the "University of Hard Knocks."

My second major criticism of my engineering course was that as engineering students we were taught in what might be called a "vacuum." By that I mean that we were given little or no instruction in our relationships to society as a whole and what should be our interest in the social, economic, and political structures of our body politic. More precisely, we were left to wonder about our duties and responsibilities to government and to God.

Now I believe that in the light of what has happened to our country and people since the beginning of World War I in 1914, there are no more important things for engineers, or for that matter all men, to know than the answers to these questions:

1. What is the proper function of government?
2. What is our duty to God and to our fellowmen?

It may seem strange to you that an engineer should attach so much importance to two questions which seem so completely unrelated to the practice of engineering. But I believe they are, in fact, of the very essence of engineering, for I am sure that every good engineer, as he plans ahead, has his eye set on the ultimate utility of the thing which he is devising. Unless that thing has a long-range, substantial, positive, and productive value, it is quite likely to be rejected. Such long-range values can be estimated with some degree of accuracy only in the light of probable governmental actions which, in turn, are dependent upon the morality of the citizens, as I shall attempt to show.

Furthermore, I believe the two questions which I have posed are closely related. It is only if we have a clear conception of the function of God or natural law or moral law — or whatever designation you want to use for the supreme and infinite power — that we will be able to achieve a clear concept of the proper function of government. With this knowledge will come an awareness of the great danger to "our lives, our fortunes, and our sacred honor" in which we now stand,

Any engineer who is worth his salt wants to see the product of his labors contribute to the service of mankind.

Underwood and Underwood



N.B. This article represents the text of an address delivered by Admiral Moreell before the M.I.T. Club of Western Pennsylvania, in Pittsburgh, on May 25, 1953.

if we do not proceed at once to curtail the power of the state which has already eroded our individual liberties to an alarming extent.

Any engineer who is worth his salt wants to see the product of his labors contribute to the service of mankind. I hold further that the domination of the creative mind by bureaucratic control of government will not only deny to mankind the fruits of the sweat of the engineering brow, but will in the end be so repressive as to result in the extinction of the creative species. This would mean the leveling off, *at a low elevation*, of all mankind into a coercive society similar to that of the ants and the bees.

Now you may ask, what is the fundamental function of our government as it was originally conceived? To determine this it would be well to go back to the American Revolution.

The American Revolution was founded on a set of new ideas. The founders believed that each one of us has an inalienable right to life. The right to life must carry with it the right to protect one's life and the right to sustain that life. The sustenance of life requires the control of the fruits of one's labor; that is, one's honestly acquired property. Without these corollary rights, the right to life is a phrase without meaning.

To secure these rights, it was agreed that the people would appoint an agent whose duty would be to do for all of them collectively but equally that which they had a right to do for themselves individually. This agent, called "government," was commissioned to defend the lives and livelihoods of the nation's citizens; to invoke a common justice; and to keep the records

incidental thereto. Other than this the people were to be left free to pursue their own interests, whatever those interests might be.

What was so revolutionary about those ideas? It was this: Never before in history had any people succeeded in establishing themselves as completely sovereign. Never before in history had any people succeeded completely in relegating the political agency of force, that is government, to the position of a servant. Never before had the idea been put into practice that the fruits of one's labor are one's own to keep, to trade, or even to give away if he so chooses. Always before in history it was the agency of force — government — that was sovereign. Any right to one's product, even to one's life, was a right granted to the people by the agency of force, that is, by government. But the original American ideas, when put into practice, limited strictly the agency of force and thus released the creative and productive energies of the millions who constituted America's citizens.

This brings up the question: Have we adhered to those basic principles upon which there was erected an economic and social structure which provides for the individual citizen a larger measure of spiritual and material welfare than ever before in the history of the world? I am sure that you know the answer to that question. For the growth of governmental power in this country has been so great and so rapid that the answer is quite obvious. By misusing the "general welfare" and "commerce" clauses of our Constitution, by unwise constitutional amendments which nullify the intent of the founders, by judicial decisions influenced by political expedients, and by abdication by the Congress of its power in favor of the Executive, the advocates of an all-powerful centralized state have succeeded in erecting a top-heavy structure of controls, regimentation, subsidies, and punitive taxation. These have impaired the liberty of the individual to an extent such that many true liberals now believe that the cause for which the American Revolution was fought has already been lost.

The centralization of power in the hands of the executive branch of the federal government by subversion of the legislative and judicial branches has gravely impaired that system of checks and balances which the founding fathers erected with such great care and devout faith as the guardian of our individual liberty. Today the state's power penetrates every nook and cranny of our social and economic structures.

The founding fathers looked upon government as primarily a preventive mechanism; that is, a mechanism designed to prevent interference with the liberties of the individual by any other individual or group. It seems that we have rejected this concept. We have drifted into the easy habit of looking upon government as an instrument of positive action to provide for all — not only security, but also ease and comfort.

We appear to accept without protest the thesis that government should have the duty to deprive certain citizens of the fruits of their labors in order to benefit others who cannot or will not provide for their own needs. This, we say, can be done only by conferring absolute power on government so that citizens are forced to yield when their earnings are taken from

(Continued on page 40)



Ewing Galloway, N.Y.

We must appraise the values of engineering works in terms of their effects on both our material and our spiritual standards of living.

An Appraisal of SUBURBAN MIDDLE CLASS LIFE

*What Happens to Society When Moral and Parental Influences
Wane? When Leveling Forces Operate? When Taxes Remove
Incentive? Such Are the Questions Asked*

By JULIAN A. JOFFE

It is generally accepted that our society is divided into three strata which meld gradually from the lowest through the middle to the upper. Although the lowest of the low is far removed economically from the highest of the upper class, yet the innumerable steps in between are often imperceptible. For convenience, students of the social sciences recognize the three main divisions and then further subdivide each class into three smaller categories. In this manner, our society is broken down into a total of nine groupings. Each class has within itself its own low, middle, and upper subdivisions.

The Greek philosophers long ago observed that, to be healthy, a society must include a happy and strong middle class, to serve as a buffer between the two other classes at its extremes. It serves as the societal balance wheel that counteracts the potential oppressiveness of the upper class and tempers the unrequited desires of the lower class. The middle class offers a competitive threat to the upper and a hope to the lower.

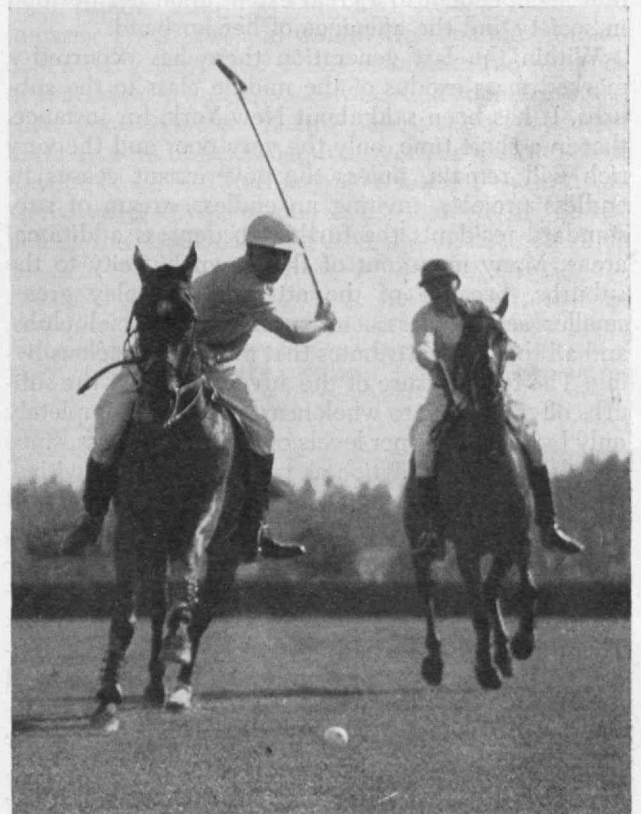
It is a Marxian theory that the greed of the upper class is so voracious and so insatiable that, given sufficient time, its members will ultimately grind the middle class to the level of the lower class, at which time the social distance between the two extremes will become so great that the society will collapse. This theory presupposes a societal life with neither compromise nor accommodation. There is but one devastating conclusion for the Marxist: the operation of an inexorable fate grinding all society into a single proletarian whole. Capitalistic peoples deny the validity of such Marxian presumptions and none is prepared to accept them.

Since a sound middle class is the backbone of its nation, it might be fruitful to investigate some aspects of its life in our society. That portion being examined in this article lives in the suburbs, in close proximity to a big city. Generally, its male members commute via train or automobile, leaving in the early morning and returning in time for dinner. For the sake of the discussion the members of the lower middle class shall be omitted from consideration. Life among the middle-middle and upper-middle classes shall be investigated.

The suburbanites have at their disposal the opportunity to live life to the full within the cultural milieu of our societally accepted norms and standards. They possess the wealth and the leisure to take advantage of all the external circumstances to enjoy their lives

fruitfully, comfortably, and interestingly. Should they desire, they might participate in or create cultural environments that could further enhance their spiritual and physical well-being. Of all of our people, the middle class should be well adjusted spiritually for that is the group upon whom the benefits of the American way of life with its concepts of work, hope, and reward have operated most kindly. Its members have been fortunate to have struggled and to have attained their goals in this life. The multitude regards them with great envy for the middle class epitomizes their own dreams and aspirations. Not the least of the great rewards that the lower class envisions, as one of the benefits of middle-class living, is the sense of security that membership apparently includes.

The members of the middle class have met with varying amounts of economic success, some even be-



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The full measure of the advantages that the suburbs offer is enjoyed only by the wealthier levels of the middle class. It is very expensive to live a suburban life to the full.



Harold M. Lambert

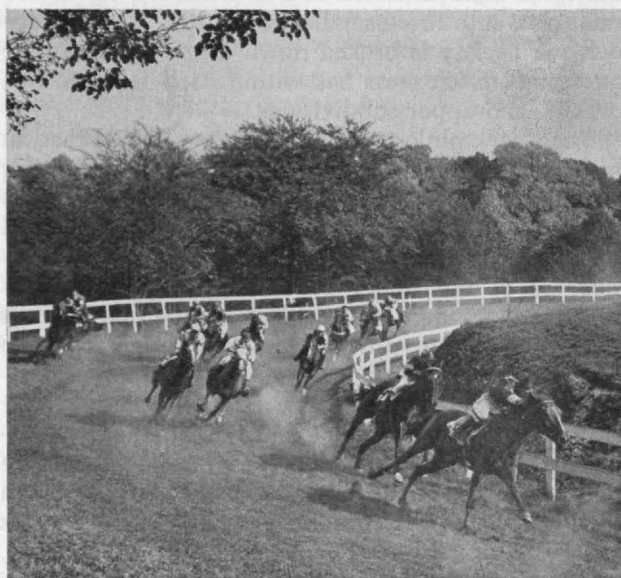
These activities continue all afternoon and generally degenerate into card parties. . . . In season, there are the races at the tracks.

ing very rich. Those at the lower end of their category have not attained the necessary affluence for the leisure that is so characteristic a phenomenon of the more fortunate members of their class. This leisure becomes first apparent in the middle of the middle class. The lower groupings have to work and strive to make every available dollar rend its greatest return. Since it is in the home that the bulk of the expenses occurs, it falls upon the woman to carry the brunt of the burden of her class. She "slaves," works, or kills time — dependent to a great extent upon her position in society and the affluence of her husband.

Within the last generation there has occurred a marked mass exodus of the middle class to the suburbs. It has been said about New York, for instance, that in a short time, only the very poor and the very rich will remain, unless the government ceases its endless projects, inviting an endless stream of substandard residents the further to depress additional areas. Many move out of their own big city to the suburbs, because of the attraction of play areas, smaller school classroom enrollments, social clubs, and all the other attributes that make for gracious living. The full measure of the advantages that the suburbs offer is taken to wholeheartedly most completely only by the two upper levels of the middle class, since they have the inclination as well as the wherewithal. It is very expensive to live a suburban life to the full!

The middle class has fought its way, competitively, to gain its coveted position. However, its membership, by far and large, is neither sufficiently nor inherently wealthy to feel secure in its attained rank. The insecurity of the middle class is pitiful, for its tender hooks upon riches are not wrought with inherited gold bands. Its hold is fragile, dependent upon a successful profession, an excellent position, a profitable business — all of which, for any number of reasons, may disintegrate with precipitous suddenness. Moderately wealthy suburbanites can see the pinnacle above with the chosen few, as well as the dark and forbidding crevasse stretching to an unfathomable depth below with its depressing masses.

The women of this cross section of our country uniformly employ domestics to save themselves the drudgery of housework. Many find that a solitary domestic is inadequate, mainly because these workers have been strongly and naturally influenced by the laziness and lethargy of their employers. There are innumerable chores about the home that the domestics categorically refuse to attend to. However, in the rare instance where the mistress co-operates, it is indeed astonishing how the houseworker increases her efforts and accomplishments. If Mrs. Suburbs declines to accept the responsibility of work in her own home, her domestic becomes a mere dishwasher and bed maker. In such an eventuality, even though a washing machine may be part of the equipment of the ménage, a laundress is employed, unless the bulk of the soiled materials is sent to the laundry. The permanent employee will rarely wash windows or clean walls. For such so-called heavy work, men with established clientele have their set routes, going from



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house to house. An especially capable individual is highly sought after. A woman who is blessed with such a man with strong back and willing arms will go to any length to retain him. He is showered with gifts, meals, and even is bailed out when — or if — he comes to grips with the law.

Both man and wife are responsible for a situation in the labor market that renders it difficult for those less affluent to hire competent help when they, too, might need it. Some suburbanites spend sums on gardeners and other day laborers far beyond their economic value and worth, accepting ridiculous rates for little reason other than that they can afford it. Work on lawns often is so shamefully expensive that a reasonable individual is aghast at man's cupidity. Many thousands of dollars are squandered upon insignificantly small plots of ground, or tens of thousands upon larger ones so as to enclose the home within an expensive green frame. Trees are felled to develop lush, soft green carpets upon which no child dare romp, set foot, or play.

Like the exterior surroundings, the interior of the home also is carpeted expensively. It is indeed remarkable that with a high degree of uniformity the floor covering is of a thick nap, as is to be expected, but in addition it is almost always of a very light hue. Naturally, such pale shades show soiling more quickly. This is a desirable feature as it indicates that the host and hostess can afford servants to keep it clean! In addition, those who are cognizant recognize that the downstairs area so carpeted is never permitted to be used by the children, lest they stain mother's rugs. Not only are the carpets cared for as a sacred possession but the chairs are too valuable to be sat upon every day. Often they are covered to protect them for guests. Thus we find that the family, in spite of superb furnishings, eats in the kitchen or breakfast alcove. Guests, of course, are regaled where the wealth can be displayed. Everything is for them to see but not for the family to use. The suburban house is no home in the poetic sense, but a storage building for prize possessions. Ostentation is an accompaniment of pretension.

In former times, when a girl married, she became a housewife and eventually a mother. Today, the radio has chosen to glorify our women as homemakers. When the wealthy, middle-class woman moves into the suburbs, she employs an interior decorator to furnish the home and virtually to choose everything — wallpaper, rugs, chairs, light fixtures, pictures, fabrics, bath tubs, showers — everything that in the ordinary sense goes into a home as a prerogative of its ownership. She hires experts to plant her grass seed, to lay out the garden, and to buy the garden furnishings. True, our suburban woman can (if she wishes) be a mother, but she is no longer a housewife nor is she a homemaker.

Some of the women will drive their husbands to the suburban trains, only to return to bed after that chore. Often their days never start before 10:00 A.M. There are the rare exceptions who even suffer to have breakfast with their husbands. What they eat at that meal or at others is not of itself consequential, if it were not for the fact that the majority, because of their lazy existences, overeat and overindulge. Suburban women are endlessly talking of reducing. They make a fetish of food fads, and such topics are a common course of conversation.

To obliterate the ugly effects of a high caloric intake, our suburban men and women frequent institutions which cater to that aspect of their lives. Regularly both sides attend gymnasiums for suitable massages and reducing exercises. For two or more weeks at a time the women migrate to stagnate at "milk farms" where, under a police-state like supervision, they are starved for an adequate remuneration. This is a thriving business.

The matter of television brings up another interesting observation about the suburbs. Its residents have taken to this latest boon to American industry with enthusiasm. If a house has one set it can afford two or three, in the upper categories. Many have them in the rumpus room (a combination private saloon and children's play pen) or in the living room, den, or card room, as well as in one or more bedrooms. In this manner, no matter where one might be in the house,



H. Armstrong Roberts

Thus they go their merry ways. One may prefer deep-sea fishing while the other enjoys the mountains.

there is always available nearby a plethora of entertainment.

With an expanding population and an ever-growing technological development, the tools and knowledge of industry are employed to create greater liberty for all from the bondage of work. Immigrants and those poorer native born, who yet have the uncorrupted drive and intelligence, realize that self-improvement and education are the leading ladders for hierarchical advancement up the social pyramid, and use their new found time for study and cultural advancement. Unfortunately, our suburbanites, by far and large, have "arrived," and many of them bemoan their fatigue after the long and arduous economic journey. Their time and wealth are squandered upon expensive gadgets and mass-communication methods of relaxation, awaiting as it were, in a comatose state, their own inevitable demise. They seem suspended amid an aura of perfumed luxury, their senses dulled, devoid of critical evaluation, indulging endlessly in stereotyped conversation. It is difficult to decide among the New Deal, television, and radio as to which

Or one may be enticed by the excitement that Cuba offers while the other may prefer the soothing baths of one of our best known spas. The boredom and ennui that characterizes so much of our suburban life is reflected in the need for running away for vacations.

Harold M. Lambert



has been the greatest equalizing force in the American way of life. However, there can be no question as to which are the intellectual levelers.

If she does her own purchasing, the suburban woman shops via the telephone. Some years ago the author had occasion to observe the mechanism (within a series of very high-class markets) whereby this service operates. It was indeed revealing, for it gave an insight into what is a highly insulting and degrading practice. The various markets that cater to suburban telephone shoppers are at a distance from their clients. Therefore, they have little fear from comparative shopping. If it should ever come to pass that a price were questioned, the stock reply is that the quality of the specific item is "indeed superior." The only economic justification for the existence of such high-class, suburban markets is that they cater to women who do not care to be concerned about their food budgets.

Women's clothes are a problem to all men, except that in the instance of suburbs, more of it is sewed privately by fashionable dressmakers. Certainly a good deal of it is either "taken in" or "let out" by these women, as the ravages of appetite take their tolls. Most of the exclusive shops never run sales because of the effect on their customers' morale. Instead, they sell their postseason garments to cut-rate or auction stores far removed from their fashionable neighborhoods. The choice garments may then be bought for a fraction of the original price. For a slightly higher price the clothes may appear under new labels in mass locations. The women of the lower-middle class spend many afternoons a week hunting for these left-over bargains.

An amusing foible of this social group is the importance attached to personal appearance. The hairdressers, manicurists, and masseuses travel from home to home with their skill and their gossip. The ritual consumes hours and is enjoyed by all. It is repeated during the week as often as vanity demands and the purse permits.

Harold M. Lambert

The less affluent patron frequents beauty parlors in town. The hysterics and pandemonium that rage in the house lest the woman be late for her appointment at the hairdressers' should bespeak a more worthy endeavor and undertaking.

If Mrs. Suburbs be through for the moment with her apparel and facial problems, she has free time for a luncheon, tea, or the club. These activities continue all afternoon and generally degenerate into card parties. In season, there are the races at the track. That she may lose a little money at each is inconsequential, but when she wins, the occasion is memorable and important. Whenever possible, she endeavors to have her afternoon nap. It is no wonder these women outlive their husbands!

Suburban women do not have the superfluous wealth to really do things, but remain on the side lines jealously watching the upper-class rich. They may belong, or lend their names, to worth-while endeavors but rarely are they workers in the true sense of the word. Instead, as a group, they complain about anything and everything. Their lives are so barren of interest and purpose that they become introspective, and endlessly frequent doctors for diverse symptoms. To listen to them discuss their ailments would be ludicrous if it were not so sad. A frequently heard admonition by Mr. Suburbs, "Honey, you must relax," causes one to wonder from what.

Earlier in this article it was mentioned that those within the higher brackets of the middle class suffer from fears of economic insecurity — the women more so than the men. The latter are accustomed to work, and if need be, turn on more pressure. Should the income be curtailed, or there be signs that it might be reduced, it would be the woman who would have to economize. This would necessitate more judicious shopping, a decreased allowance for clothes, and/or a greater share of household chores to fall directly upon her! Such changes border upon the catastrophic and are terrible to contemplate. Every conceivable subterfuge is concocted to forestall such an eventual-

ity. Thus, a dress is bought to buoy up the spirits. The explanation usually runs along the lines of: "It did something for me." The customary hairdo and facial are explained away by: "I needed them. I was so worried looking. You would not want our friends to know about us, would you, dear? Fire the help?"

If the household help is curtailed, it remains so for a very short period. It is not so much that the food might be inferior, or that the beds might not be made, or the living room left unswept, but rather that the master finds that his spouse has become a nervous wreck. She cannot "take it!" Reverses come hard!

Mr. and Mrs. Suburbs entertain prodigiously, and in turn, receive reciprocal invitations. But for all their parties, dinners, and dates they enjoy few friends.



And so it appears that the life of the suburban woman tends toward the parasitic. She is neither a helpmate nor a housewife. As a rule, when she and her family settle in their home, all the children that are to be have been born to the couple. Her interests being so dominantly egocentric she has ample opportunity for self-pity and worry, and indulges in a mild form of satisfying hypochondria. Her illnesses, pains, and aches receive sympathetic attention from physicians and friends. Such innermost problems always become interesting conversation pieces when suburbanites gather. Difficulties that less affluent women learn to expect, through the hardships and vicissitudes of life, become insurmountable burdens for many suburban women. Suburban women live from one crisis to another.

In the instance of suburban women, it may be said pointedly, that "all that glitters is not gold." For all their apparent comforts their lives are not as enviable as might be expected. Their interests are woefully narrow and their existences dull. However, it must be noted that it would be the rare exception who conforms in every particular to the characteristics described in the body of the article. Although the ideal type would be extremely unusual, the majority of suburban women within the two upper divisions of the middle class would be found conforming with most of the observations for their groups.

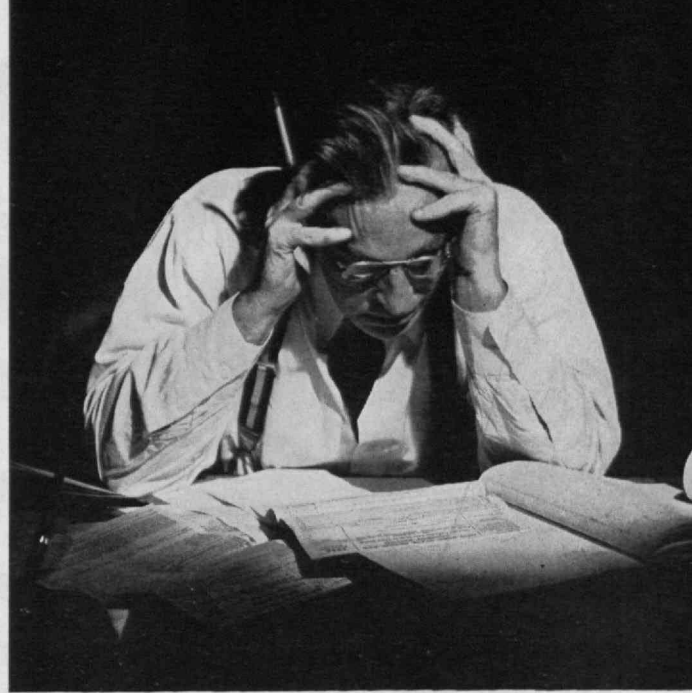
The characteristics displayed by suburban women are but the reflection of the uncertain lives led by their spouses. The latter are torn between two forces. They strive to beget wealth, to amass tangible evidence of fickle security and to escape from the resultant nerve-racking, grinding effect upon their own lives.

Years ago, the drive to work and to attain position and wealth had a distinct philosophical and religious connotation. This has been analyzed best and portrayed by Max Weber in his renowned volume *The Protestant Ethic and the Spirit of Capitalism*.^{*} Herein we discover that because of the religious sentiment and belief surrounding predestination and salvation the early Puritans and Calvinists had a "call" to work. Their striving for acquisition stemmed from a sincere spiritual force.

The suburbanite accumulates for he knows not what reason. He has no "call": his is a drive, a maddening desire to get more — more of anything and everything — from which he likes to run away, to escape, as often as possible, to be with others like himself who also have become depressed over the abject helplessness of their conditions. Endlessly they ask of each other, "Why?, oh why do we do these things? The rewards are not worth the effort nor the waste of our lives. We become wornout old men before our time, and anyway, we cannot take it with us."

Veblen, many years ago, observed how acquired wealth can be squandered needlessly. The suburbanite exactly fills his concept of life devoted to "conspicuous consumption." The Puritan or the Quaker never surrounded himself with tinsel or gilt. His religion forbade him. No such moral scruples surround the suburbanite. He glories in expensive china, rarely

^{*} Translated by Talcott Parsons (New York: Charles Scribner's and Sons, 1930).



Underwood and Underwood

Wealth is confiscated through taxation. Acquisition is discouraged and incentive for further gain, ethically achieved, is considerably diminished. On the one hand wealth is taken away; and on the other it is distributed to farmers to curtail production. . . . Incentive is becoming a marginal utility.

used because it is so fragile. He adorns his walls with the paintings of neurotic artists. He and his wife will buy useless trinkets in Mexico, or Brazil, or Cuba while on a cruise so that their friends and neighbors may always have tangible evidence that he and his have money to burn, time to waste, and are proud of it. Ostentation has become an American "good" of the middle class.

Vacations, as enjoyed by suburbanites, form somewhat different patterns from those of other groups. The most obvious characteristics are that they occur with relative frequency and extend overly long. In the lower portions of our economic life, entire families enjoy together a week, or possibly two, of freedom from work. Rarely do husbands and wives separate for their yearly rests. Suburban men and their wives do not necessarily vacation together. It is not uncommon for the suburban women to dislike (and to be able to afford to dislike) places their husbands prefer to enjoy on their vacations. Thus, they go their merry ways, and at odd times. One may prefer deep-sea fishing while the other enjoys the mountains; or one may be enticed by the excitement that Cuba offers while the other may prefer the soothing baths of one of our best known spas. The boredom and ennui that characterize so much of our suburban life is reflected in the need for running away for vacations. These "changes," recommended by well-paid doctors, occur in direct proportion to the degree of marital maladjustment, economic insecurity (upon a wealthy level), and general dissatisfaction with life. A minimum of two such breaks a year are a must: usually there are more.

Within the suburban environment, the children are the greatest sufferers. Since the lives of the parents are basically insecure and unsatisfying, they cannot but reflect this uncertainty upon their children. A

(Continued on page 44)



H. Armstrong Roberts

FUTURE TECHNOLOGICAL DEVELOPMENTS IN The Dairy Industry

*Major Contribution in Providing Adequate Food Supply
Can Be Made by Increasing Basic Milk Yield Per Cow
and Utilizing Milk and Its Products More Efficiently*

By MILTON E. PARKER

THE dairy industry, one of the major food-processing industries, can point with justifiable pride to its own technological progress and also to the fact that such progress has made significant contributions to the progress of its industrial contemporaries in the food field. However, the dairy industry forms but part of the nation's food basket. The food field is a tremendous, fast-moving, highly competitive group of industries ceaselessly inventing new and better ways to produce, prepare, process, handle, and distribute its gigantic annual output of nearly 60 billions of dollars' worth of food. Truly, food processing constitutes the Goliath of all our national processing industries.

The public health movement in the United States, aided and abetted by the scientific acumen and technological foresight of Professors William T. Sedgwick, Edwin O. Jordan, '88, Samuel C. Prescott, '94, Charles-Edward A. Winslow, '98, and others, has made its imprint on the quality of foods being processed and distributed today. In its inception, that movement was motivated by the necessity of providing safety, so dramatically demonstrated in the researches of M.I.T. men in water purification, milk sanitation, and commercial canning. The early pioneering efforts suc-

ceeded in the virtual elimination of the infections and diseases that delayed the public's early acceptance of commercially processed foods. Inasmuch as bacteria of various and sundry descriptions, both pathogenic and harmless, found milk their most nearly perfect vehicle for the dissemination of disease and food spoilage — just as the human family also found it the "most nearly perfect food" for its own nutrition — it was only logical that the conquest of these enemies of public health and quality had to be realized.

Such a campaign was furthered by the discoveries of pasteurization and mechanical refrigeration; the latter, incidentally, originally fostered the commercial development of the dairy industry as well as of meat packing. Consequently, it is not surprising that in solving its technological problems with the delicate, basic food it was concerned with, the dairy industry found solutions that were applicable to other foods as well. Some of the major contributions to the present-day practices in the manufacture of other commercially processed foods will be outlined subsequently.

In the ensuing years since the advent of the Twentieth Century — and as the scientific and technological frontiers of public health were being penetrated and advanced by some of the graduates of the

Department of Biology and Public Health of M.I.T. — the dairy industry has enjoyed its role of industrial pre-eminence as it gloried in the aura of being the purveyors of nature's "most nearly perfect food." That distinction led many of its leaders into thinking that no other food could ever threaten the supremacy of the products of milk. In fact, in 1923 the dairy industry prevailed upon the Congress of the United States to pass an act defining butter — the first and only time such congressional action was ever taken in behalf of a single food commodity. Meanwhile, as the ravages of disease were conquered with the advancement of pasteurization, it became obvious, after repeated warnings from the consuming public, that the flavor of milk was being impaired perceptibly. Coincident with the confidence in the public health safety of pasteurized milk supplies, however, the commercial canning of foods advanced with the improvements in its industrial processing made possible by the introduction of the steam-pressure retort.

It was also discovered that metallic contaminations affected the flavor of some processed foods, including milk; and that the thermal-processing techniques used in pasteurization and pressure retorting imparted cooked tastes which detracted from the natural flavor characteristics of good quality foods, including milk.

As these advances were being made, the profession of food technology, which found its major champion in Professor Prescott (the original President of the Institute of Food Technologists), became active on many technological fronts with discoveries that thermal processing could, in truth, impair the flavor of foods and could also adversely affect their nutritional values. These discoveries led to improvements among a great variety of foods.

With its understandable attitude concerning the natural excellence of its own products, the dairy industry aggressively opposed the public acceptance of competitive foods. In earlier years the dairy industry was concerned about fraudulent claims for some competitive products, but these were later improved and did have a definite economic appeal to certain segments of the population. The shrewdness of certain industrial leaders in competitive food industries capitalized on a blind resistance to progress in some quarters of the dairy industry. Although history had repeatedly demonstrated that consumption curves were obviously influenced by prices — butter consumption rising as its prices fell and vice versa — a rude awakening came when our national consumption of margarine approached and then exceeded that of butter. And to add emphasis to this economic corollary, sudden competition has developed from frozen desserts whose fat components are of vegetable origin. These desserts can threaten the future security of the ice cream industry as that of the butter industry was threatened before the onset of World War II. There are, however, definite hopeful signs that the leaders of the dairy industry are not going to be blind to this latest threat, for many of them are now catering to the public's tastes and pocketbooks rather than opposing its preferences.

The stresses and strains to the economic future of the dairy industry will require adjustments in production, in processing, in products, and in distribution.

Strange as it may seem, the aggressive competition that the dairy industry is facing today has been made possible by some of its own major technological developments. However, most of it has been contributed by the improvements and discoveries of food technologists in other fields. The solution of the problems will inevitably be found in economics, by making milk less expensive and more plentiful. It is no heresy to advocate greater milk production; as a nation we do not consume nearly as much as we should even though we presently have an acute surplus. Nevertheless, the burden of solving the problems of the dairy industry will rest heavily on the shoulders of special kinds of food technologists, for there will be an ever increasing emphasis on those trained specifically in the engineering aspects of food processing.* Any food industry is apt to find a specific kind of technologist, such as a dairy technologist for example, too great a luxury. Competition in foods is going to demand breadth of knowledge in the fundamentals of production, preparation, processing, handling, and packaging techniques. The dairy technologist, therefore, is apt to find himself too limited in vision unless he broadens his basic knowledge to exploit the unusual technological resources of the dairy industry to their fullest. That is, the technologist is going to require the ability to deal with fundamentals of nutrition, as well as the scientific and engineering fundamentals employed in the processing of all foods.

Before we prognosticate future technological developments in the dairy industry, we should review briefly some of the more important ones of the past. We might start with the fact that while starting a vogue in unit food packaging as well as trademark advertising at the turn of the Twentieth Century, Uneeda Biscuit also stimulated the paper industry of New England by creating a demand for its products in the distribution of foods. Then, too, in taking crackers out of the barrel and packing them in a chip-board container with a waxed paper liner and a printed paper overwrap, Uneeda also stimulated the former Continental Creamery of Topeka, Kansas, to undertake the merchandising of their Meadow Gold brand of butter in similar packages. Simultaneously, packaging experiments of Emerich H. Vavra at the Spring Brook Creamery, in Elgin, Ill., then the butter capital of the world, had two important effects. It led the Standard Oil Company and its competitors into the development of the microcrystalline waxes of today; more immediately, however, it laid the foundation of the so-called wet-waxed folding carton in which we buy our butter, or our margarine, when we pick up our favorite brand at any store. This style of package also led to the wet-waxed wrappers used today in merchandising the sliced bread we also buy at grocery stores. So, granting the author a bit of poetic license, we might say that the bread and butter business started our modern developments in unit food packaging!

We also hear a lot of discussion these days about taste panels to which newly developed foods are presented for prior appraisals before somebody speculates a million dollars to put a new food product on

* Charles W. Kaufman, "Progress in the Food Industry," *Food Processing*, June, 1953.

the national market. We say "speculates" advisedly, for the taste panels make the market introduction of a new food product a calculated risk, which otherwise would be an out-and-out gamble. But when we look back into history, we find that in a number of the World's Fairs following the Columbian Exposition, trained taste panels were selecting the winners of gold medals awarded for the quality excellence of products. And that is not all, for such beginnings soon led to commercial scoring methods for appraising marketing qualities as well as the commercial values, or prices, of butter — and later on for numerous other food products, too.

A prevailing and exciting interest in canning circles today centers around discussions of aseptic canning, end-over-end thermal processing and continuous agitating cookers. All such developments use knowledge gained in the dairy industry's earlier experiences with high-temperature, short-time techniques of milk pasteurization with its attendant advantages of superior flavor, yet with the retention of adequate health safety qualities. Then too, that phenomenal food processing industry of such amazing and rapid growth — the so-called "baby food packers" — were guided in their disintegrating or comminuting of spinach and other vegetables by the earlier experiences of the ice cream industry, and later the market milk industry, with the homogenizer. In passing, we might point out an anomaly — the baby foods have their greatest consumption among old persons and invalids!

These are but a few of the milestones established by the dairy industry which have guided other food industries in realizing their own substantial technological advancements and achievements. Neither time nor space permit an exhaustive recounting of all the

improvements in food processing attributable to the technological advances of the dairy industry. But in passing, let us not overlook the importance of the sanitary design of dairy processing equipment made of gleaming-stainless steel and similar alloys, nor the sound sanitary design standards which are followed in the construction of other food handling machines (of recognized value to all food industries) in the furtherance of their own sanitary processing practices.

While the dairy industry can "point to the past with pride and the future with confidence" because of the technological developments it has thus fostered, it can ill afford to do so with any complacency. For with the present rate of technological developments, plus the growing pressure of population upon our food production, the industry needs to be alert and ever more progressive if it is to retain its technological leadership.

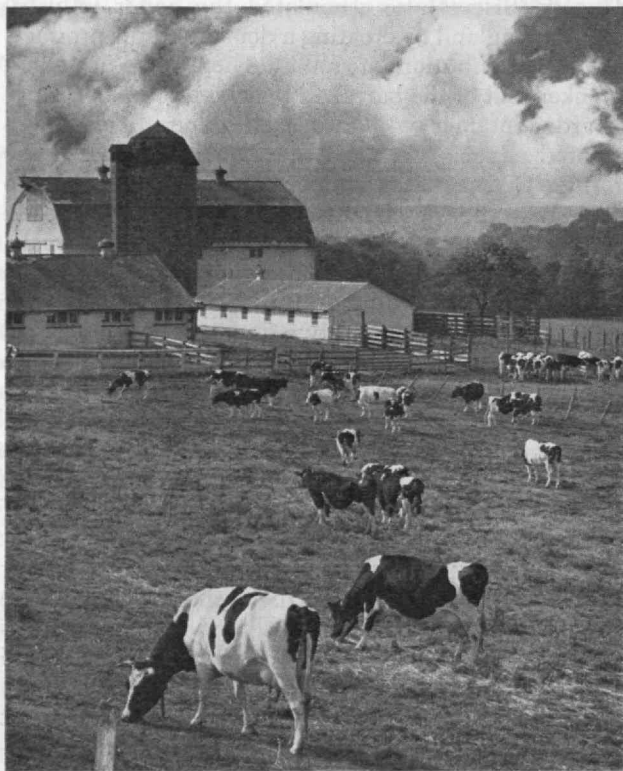
Then too, in addition to their own internal competition, all food industries are constantly pitted against competition of every other industry interested in selling food and allied products. It has become axiomatic that, to progress, a close check must be kept on the activities of competitors as well as all developments pertaining to products, processes, and equipment. Also, consumer preferences and economic influences cannot be ignored. There is nothing static about any food-processing industry. We see radical changes in markets taking place almost overnight as consumers are weaned away from conventional food products to those possessing unusual appeal, economy, or convenience in the estimate of the buying public.

One great factor to be kept foremost in mind is that the tempo of development is gathering more and more speed. Life literally is changing under our very eyes. Today we have things we did not have yesterday. And what is more important, the rapidity of the change is accelerating at a bewildering rate.

There was a time when developments depended solely upon new things happening by accident. The curiosity of Benjamin Franklin, for example, led to his playing with electricity for the amusement of his friends. A little later we see the advent of the systematic seekers after scientific knowledge, Faraday being among the earliest. Edison was one of the first to organize research groups on a commercial basis. Today we have literally hundreds, if not thousands, of research groups in industry and universities. Constantly, we hear of new organizations of professionals who are brought together by the pressure of events for the purpose of sharing, discussing, and solving mutual problems.

The impulses of any organized efforts serve to activate the impulses of other organized efforts. Translated into more practical terms, this means that competition among individual companies of any given industry is not only accelerated but, in addition, self-preservation is forcing competition to develop between different industries. When we attempt to resolve our discussion in terms of food products, it immediately becomes apparent that competitive forces will be intensified if only by the fact that a human being does have physical limits to his food intake (the per capita consumption of food hovers around five pounds

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Harold M. Lambert

It is no heresy to advocate greater milk production; as a nation we do not consume nearly as much as we should even though we presently have an acute surplus.

The Promise of Tomorrow

Address to the Class of 1928 Emphasizes that Continuing Personal Growth Is the Great Promise Which the Future Holds for Those in the "Afternoon of Life"

By ERWIN H. SCHELL

THE current convention in good teaching now lists heavily toward active student participation. We hear frequent suggestions for dealing with the "awkward pause," and discussion of further ways and means for motivating collaboration. As for me, the lecture is still included in my kit of teaching tools. Here, too, there are unfortunate interims, but they are never awkward; my students, without exception, sleep gracefully through them, and you may do the same.

Again, I should warn you that my comments will reflect little of modesty in the expression of my point of view. Years ago, when I first began my teaching, a student came to my office and urged me to present my own attitude concerning the recorded executive decisions of the various managerial issues which we were studying. I demurred, pointing out that my knowledge of the given situation was little more than that of my listeners, and that they would undoubtedly overestimate the worth of any statements I might make; whereupon the student responded: "Oh, don't worry about that, professor. We can allow for you." So, today, I shall speak forthrightly and with candor, realizing that here too, my words must be subject to your kindness of heart.

This day is a happy day for you. Reunions are true carnivals of the heart. Our friends of past years are once more seated beside us in their long-accustomed places. Our memories of past pleasures now once more become realities. Recollections of our youthful days at Technology are refreshed and enjoyed. And we are gratified and inspired to discover how indissoluble are the bonds of earlier friendships which have maintained their potency despite the passage of time. Reunions serve to convince us that the deeper the satisfactions of life, the longer the time during which they may continue to bless us.

Yet of even greater significance to all of you is the fact that this gathering marks your 25th reunion. Why, of all reunions, is the 25th the most significant? I believe it is because it stands at the apogee of life's miraculous span. It marks the turn of our day upon earth, when our morning has run its course. It is the symbol of high noon. As the hands of our cosmic watches point to heaven, we can begin dimly to see something of the changing scenes which lie ahead. We shall not be so childish as to bewail the passing of the days of our youth, nor shall we look with apprehension upon problems of maturity which now confront us. Rather we shall remember the words of the Elder Pliny which President Richard C. MacLaurin caused to have carved in the lintel of the fire-

place in his office and which, translated, read: "In endings are beginnings found." So I shall speak to you of five such transitions which lie before you. Though they mark both ends and beginnings, these changes are distinctly gradual in nature, reflecting a shift in emphasis rather than an abrupt adjustment.

As we look forward, we shall be ready to accept the waning of our physical powers as inevitable in the days to come. True, we are much quicker to acknowledge this tendency among others of our classmates than in ourselves. But we cannot gainsay its presence. So we turn, if we are wise, toward the development of a compensating resource. If we have earned the respect and co-operation of those about us, and particularly of the oncoming generation, we shall find that increasingly we may delegate our activities to them, thus multiplying our energies and thereby even enlarging upon our accomplishment.

A little time ago I talked with a Technology graduate who had spent his earlier professional life as a metallurgical consultant. Realizing his lessening ability to become of increasing service solely as the result of his own efforts, he undertook the acquisition and operation of a small business. This undertaking thrived under his hand; and today, in his later years, it yields him the continuing assurance of growing usefulness.

As we pass our meridians, our creative fire, our imaginative verve, our innate inventiveness, tend to lessen in degree. In today's research laboratories, industry depends largely upon the trained and eager

If we have earned the respect and co-operation of those about us, and particularly of the oncoming generation, we shall find that increasingly we may delegate our activities to them, thus multiplying our energies and thereby even enlarging upon our accomplishments.

Underwood and Underwood



minds of the young for those new and extraordinary concepts which may well revolutionize our way of life. Here again, we find countervailing resource in collaboration with others. If we will but employ the newly recognized resources of group speculation and suggestion, of group contemplation, of group ingenuity, we shall find that our practical experience, our tempered judgment, and our somewhat more judicial viewpoint will make us even more useful and essential in the expanding economy in which we live.

The president of a successful enterprise once confessed: "For some reason that is not clear to me, my associates seem to be able more quickly to reach decisions on difficult problems if I am present at the conference. I rarely am able to contribute very much to the actual discussion."

I found the answer in conversation with one of his staff, who explained: "When he is present, we are constantly aware of his desire that we find the right answer to our difficulties, irrespective of personalities or past circumstances. He has always viewed the placing of blame as a cheap political device. He always looks for the cure instead of the culprit, so we feel entirely free to lay any ideas on the table for what they may be worth."

Unless our viewpoint has become warped, and we have grown miserly, we shall find, in the afternoon of life, that our urge for acquisitiveness tends to subside. We still enjoy the thrill of possession; but its poignancy decreases as the days and years pass. On the other hand, if we but give ourselves opportunity, our interest in possessiveness may be replaced by the enjoyment of vicarious contributions. We learn that the doing of helpful things for others brings a new flavor to our efforts that is unique and delightful. Some of us find these contributions bring greatest return when they are made secretly. Again, in later life, our happiest recollections spring from the little things which we did without thought of return which have now flowered into important human services.

There is a deeper significance here. When I was a boy, my father found delight in maintaining a rather extensive rose garden. To be honest, I never waxed as enthusiastic about this as did he. This was largely because I had the frequent and questionable pleasure of carrying prickly bouquets around to neighbors who in turn burdened me with long paeans of praise and appreciation to carry back to my parents — which I consistently failed to do, largely because of a poor memory and a small boy's distaste for compliments.

But I learned one thing from the roses. It was that in their life cycle, which in our climate rarely lasted more than a year, the period of bloom followed upon a growth of stalk and leaf. It has always seemed to me that each one of us, for some interval in our lives, should have opportunity to flower in some characteristic way for the sheer pleasure of the flowering — to stand if but for a moment as an ornament to our Creator — to bloom.

As we move irrevocably into the afternoon hours, we frequently find ourselves viewing our earlier theories, which we stood ready to defend to the end, with a more tempered attitude. The precise eternal verities, which we strongly supported, now appear as single bands in a wider philosophic spectrum. To

counterbalance this lessening of abstract conviction, we discover that we may now turn to new and inspiring loyalties in our relationships with people. As the years pass and our acquaintanceship inevitably increases, our range of friendship widens and deepens, and we find our hearts and indeed our minds refreshed and strengthened by the growing warmth of our affection for others. We come to cherish those bonds of respect and confidence that bind us ever more securely one to another.

A distinguished public servant once commented: "In my experience I have found that the strongest organizations are made up of people who have a sincere and abiding admiration for the special talents of each of their associates."

There is yet another kind of loyalty which time seems to strengthen. It is our fidelity to those institutions whose constructive influence extends far beyond the life span of any one of us; from whose service we have benefited; and for whose continuation we strive. To build in our hearts a growing allegiance to such enduring forces for good, is to find a new and deeper sense of service which reaches into the future far beyond our vision.

There is yet another challenge that will present itself to us in the afternoon of life. As our efforts win us new and greater responsibilities, as our accomplishments bring repute and confidence, more of other people's troubles will be laid on our doorstep. And we know that we may not wave them away. More than this, life itself, with its growing complexities, its advancing tempo, its increasing imponderables, often lays before us more difficult problems

(Concluded on page 58)



Raymond E. Hanson

"In endings are beginnings found."

THE INSTITUTE GAZETTE

PREPARED IN COLLABORATION WITH THE TECHNOLOGY NEWS SERVICE

Annual Report of the President

PRESENTED to the members of the M.I.T. Corporation at its meeting on October 5, the report of James R. Killian, Jr., '26, President, was devoted, in large measure, to a restatement of "long-term policies and objectives which guide our current decisions and which keep us on our course." The Institute's plan and philosophy of education serve as a guidepost in administering the vast and increasingly complex affairs of M.I.T.; certainly the text of President Killian's address makes admirable reading for those who wish to be brought up to date and receive proper perspective of recent modifications in the educational program at Technology.

In opening his report, President Killian said: "The responsibilities of the Massachusetts Institute of Technology as a national center for education and research continued to grow during the past year." Such growth inevitably requires modifications, from time to time, in the methods of operation, but the premises upon which the Institute is built remain unchanged. Indeed, some of the statements in the 1953 Report of the President may be regarded as modern rephrasing of basic principles which have guided the Administration since M.I.T. was founded. For example, President Killian reminds us that: "First, we are a professional school in which professional standards of conduct, performance, and unselfish public service are controlling. . . . Next, we carry on our work in the spirit of the university, including in close relationship postdoctoral, graduate, and undergraduate learning, with the spirit of research and other forms of creative scholarship infusing all our educational activities. . . . Another important policy of the Institute is to maintain through a unified Faculty a symbiotic relationship between graduate and undergraduate study. . . . In both graduate and undergraduate study and in our community life, the Institute stresses 'learning by doing.'"

Technology Alumni will not be surprised at such statements of educational philosophy. During their student days at M.I.T. they had ample opportunity to observe, in full operation, working examples of such basic philosophy. In condensing the President's Report for the benefit of Review readers, therefore, greatest stress will be placed on those topics which may not be generally recognized, or on new, unusual, or urgent problems calling for early solution.

Directing attention to our student body early in his address, President Killian states: "Our student body is not limited to any one type. We want students who can become successful leaders of men as well as students who can become brilliant specialized research scholars (the two are, of course, not mutually exclusive). One of our principal responsibilities is to educate managerial and leadership talent for our society. This means we must seek students competent

intellectually but gifted and adept in human relations, men having the right combination of attractive personal traits to make them natural leaders.

If the Institute's students are not the one-sided kind of individual that popular conception sometimes imagines, neither is its educational program. "We at M.I.T.," says Dr. Killian, "do not accept the view that breadth and humanism in education are the exclusive property of a particular kind of education. Breadth and humanism may be achieved by students of law, of medicine, of engineering, of the liberal arts, and of the social sciences. Breadth and humanism may also be found lacking in any one of these fields."

During and since World War II, M.I.T. has been called upon to play an exceedingly important role in research for national defense. Such research activities as Technology has been called upon to undertake, primarily at the request of the federal government, have greatly expanded the Institute's personnel, space requirements, and budgets. Sponsored research has infused a new degree of practicality in teaching, particularly at the graduate level; it has also posed a number of difficult problems. With regard to its present research activities, President Killian states:

In its research policies the Institute prefers not to limit itself to any narrow or doctrinaire definition of what is appropriate research for an educational institution. We seek to encourage the uncommitted scholar and the researcher who works alone.

We know from extensive experience that sponsored research can enrich our educational program, and we do not share the extreme view sometimes expressed that sponsored research *ipso facto* is bad for education. All sponsored research should contribute to the educational objectives of the institution, should be something that the participating staff members wish to do, and should be open to graduate students. These considerations have governed our management of sponsored research.

In addition, we have recognized an inescapable responsibility in this time of crisis to undertake research in support of our national security which under normal conditions we would choose not to undertake. We propose to see this research through and to make our special competence available so long as national policy and need indicate that we should. When these conditions no longer hold, we shall withdraw from classified emergency research with enthusiasm and relief. In the meantime, we are finding ways to manage this research so that it does not, on balance, detract from our educational program.

I believe that the willingness of the Institute following the war to accept large sponsored research projects has made it possible greatly to increase our over-all contributions to the nation, enabled us in time of need to create the Lincoln Laboratory and similar projects, and made possible the maintenance of a scientific "fleet in being" of great importance to national security.

In addition to its relationships with government, the Institute cultivates wide contacts with industry. The flour-

ishing state of technology in the United States reflects a close articulation and understanding between education and industry.

Modifications in 1952-1953

In a review of the major changes which have been made during the 1952-1953 school year, President Killian reports:

With the above concepts and policies before us, let me now list the following important modifications made during 1952-1953 in our program, organization, and environment:

1. Revision by the Faculty of our first-year curriculum to permit freshmen more choice and greater flexibility and to reduce the required number of contact hours.

2. A further recasting of our program in general education, including a thoroughgoing replanning of the two-year common core for freshmen and sophomores to provide a better integration of the humanities and social sciences.

3. Establishment of a Division of Biochemistry in the Department of Biology and the consolidation of the Department of Building Engineering and Construction with the Department of Civil and Sanitary Engineering. A decision was reluctantly reached to discontinue the Civil Engineering Summer Camp and to teach surveying at and around M.I.T.

4. Other important changes in courses and curricula included the replanning and re-equipping of freshman laboratory instruction in physics; a major reorganization of the curriculum in Electrical Engineering, deferring specialization until the senior year and including a fresh and more fundamental approach to the study of power; revision of the graduate program in physical chemistry; recasting of elective sequences in the School of Humanities and Social Studies; provision of new graduate subjects in the School of Industrial Management; and the decision of the Faculty again to require a thesis or project, representing independent work, for the S.B. degree.

5. Adoption of a new plan of stabilized enrollment providing for a limitation on the freshman class of 900. Studies of our staff and buildings show clearly that a student body of at least 5,000 can be amply accommodated.

6. Acceptance by the governing bodies of the Institute of a new tenure plan, devised by a committee of the staff, relating the granting of permanent tenure to age as well as to length of service, providing for more administrative flexibility in the appointive process, and removing inequities in the old plan.

7. Completion of a two-year plant modernization and space reallocation program involving an expenditure of \$2,000,000; this included a much needed modernization and consolidation of the Electrical Engineering teaching and research quarters.

8. Inauguration of the Division of Defense Laboratories for the purpose of segregating classified military research from the educational activities of the Institute, to afford specialized fiscal management of large off-campus sponsored research, and immediately to provide for the Lincoln Laboratory, operated for the U. S. government at Bedford.

In his report, President Killian also directs attention to changes which have been made, especially during the past year, in administrative decentralization. To a greater extent than before, increased responsibility for the Institute's academic and business activities are being assumed by Julius A. Stratton, '23, Vice-president and Provost, and Joseph J. Snyder, '24, Vice-president and Treasurer, respectively. In addition,

the academic deans have assumed greater responsibility for the operation of their schools with the result that now each school has a better opportunity to develop its own educational personality. But while administration has become more decentralized, "our unified Faculty, broken up neither by schools nor by graduate and undergraduate programs, is the major co-ordinating agency for educational policy," says Dr. Killian.

Unsolved Problems — Unfinished Business

Sufficiently newsworthy as to be reproduced in full is that section of the report dealing with problems currently confronting the Institute's Administration:

So far I have been reporting items of policy, change, improvement, and progress. I must also report certain failures and numerous items of unfinished business.

I do not believe that we have yet devised an adequate method for recognizing and rewarding exceptional and imaginative teaching in the undergraduate school. Everyone wants to do something about this, and some progress has been made — but not enough.

We should constantly be making and recognizing innovations and advances in teaching as well as in research.

The Institute has critical need for a physical sciences building. We have not yet found the fund sources to provide the \$2,000,000 needed for the building and an equal amount for endowment. We should not build additional plant without additional endowment to maintain the additions.

While our level of gifts is gratifyingly higher than before the Development Program, we have not yet found an approach to long-term development which promises greatly to increase funds available for endowment. Diligent efforts are being made to step up our activity. We need to be adding \$4,000,000 a year to permanent funds; for the past two years we have averaged nearly \$2,500,000.

Neither have we been able to increase our scholarship funds adequately. M.I.T.'s scholarship aid to undergraduates compares unfavorably with that given by other institutions. This year, for example, a sister institution completed a survey of undergraduate scholarship awards granted during 1951-1952 by eight leading technical schools and four well-known universities. One school in this group awarded scholarships which amounted to 27.8 per cent of the total undergraduate tuition income. M.I.T., where 7.5 per cent of tuition fees was awarded in scholarships, stood at the bottom of the list, though this kind of analysis ignores the great assistance provided by our Loan Fund.

Recent increases in undergraduate scholarships have been made possible, to a large extent, by a decision to use the accumulated income of our scholarship funds at an accelerated rate. If the present scale of awards is to be maintained in the future, it becomes mandatory that our capital endowments for scholarship be augmented to provide the necessary income.

In common with many colleges and universities, our scholarship applications from entering freshmen continue to show a sharp upward trend. For the class entering in the fall of 1953, more than 1,500 requests, a 50 per cent increase over the previous year, were processed and considered.

For these reasons, it is clearly incumbent on us to find the means not merely to maintain but to extend our undergraduate scholarship aid.

A review of Corporation Visiting Committee reports reveals many recommendations which we are still unable to put into effect for various reasons. These include:

completion of basic equipment for the Hydrodynamics Laboratory (\$50,000); relief of space congestion in the Department of Geology and Geophysics; equipment changes necessary fully to implement the new branch libraries; reconstitution of our program in Shipbuilding and Ship Operation; provision of more adequate scholarships and fluid funds for the School of Architecture and Planning; provision of program and means for a Center of Urban Studies; further adaptation and decentralization of student government to meet needs of our enlarged residential system. To these should be added \$50,000 of equipment for Food Technology, \$85,000 for the Metals Processing Laboratory, \$25,000 to complete the equipment modernization of the Electrical Engineering Laboratories, and some \$200,000 for improvements in buildings and grounds. These items must be cared for out of new capital funds not now in hand.

In speaking of new monies needed, I must also emphasize the need for economy in all our activities. As a result of inflation and other factors we face a period of austerity and budget reductions. We seek to handle these reductions without doing injury to our academic work. Toward this end we have made a start, but much remains to be accomplished. One of the jobs ahead is to review subjects of instruction to see whether our present offering is unjustifiably large.

In his annual report, John E. Burchard, '23, Dean of the School of Humanities and Social Studies, calls attention to our need for "freedom money" to assist Faculty members to do many things contributing to their professional development and teaching which cannot be financed out of regular budgets or through grants for research projects. The need for such fluid funds is not limited to the Humanities and Social Studies. A small amount would go a long way.

George R. Harrison, Dean of the School of Science, in his report, emphasizes our responsibility at M.I.T. to do our part in helping to encourage more able people to go into secondary school science teaching. The dearth of such teachers is increasing, and there is danger that science in America will suffer.

We have already made two moves: establishing the Westinghouse Summer Program for Teachers of Science and Course IX-C for students wishing to go into science teaching. Both of these are good but not enough. Our association with the Boston *Globe* in holding in Rockwell Cage the annual Massachusetts Science Fair has been important in acquainting us with science teachers and their problems. We need particularly to encourage more students to go into Course IX-C. We should consider a special graduate degree for secondary school teachers. I am happy to report that Dean Harrison has volunteered to explore ways for M.I.T. to help make careers in secondary school teaching more attractive.

Statistics of the Year

In that portion of the President's Report dealing with statistics we learn that the student body last year numbered 5,074 of whom 7 per cent were veterans and 16 per cent were married. Of 96 women who were enrolled, 38 were graduate students. Foreign students numbered 464, and they came from 86 foreign countries. M.I.T. continues to enroll the highest percentage of foreign students of any university in America. Enrollment in the Graduate School last year was 1,921. Total population at M.I.T. — including students, staff, and other personnel which make up the Technology community — exceeded 11,000.

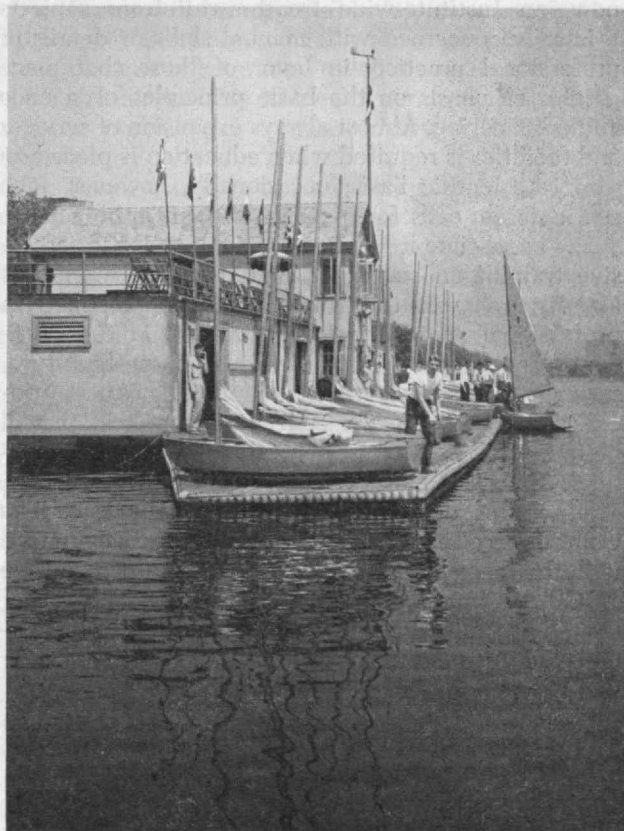
The Institute's endowment and other funds now have a total book value of \$59,940,000 invested in se-

curities and other assets with a market value of \$73,080,000. Plant assets stand at \$33,065,000, which figure is approximately \$1,700,000 above that of the previous year. For the sixth successive year the income allocation to funds sharing the general investments was at 4 per cent of book value. Unallocated investment income in the amount of \$500,000 was added to the balance of undistributed investment income, bringing this reserve up to \$1,797,000.

The Institute's Faculty and staff continue to roll up impressive records of honors, awards, prizes, and appointments in recognition of their professional competence and civic responsibility. Seven are heads of national professional societies; 17 national and international professional awards have been made to 15 Faculty members; honorary degrees were awarded to 5, and honorary professorships in foreign countries are held by 2 Faculty members.

Although M.I.T. does not offer work in a number of fields for which fellowships are awarded, 63 National Science Foundation Fellows — 11 per cent of all selected for fellowships — have selected M.I.T. as the place for continuing their study.

No difficulty would be experienced in continuing documentation of the many interesting and impressive facts which indicate the Institute's position in higher education in the United States. Alumni who are interested in such matters will find details in President Killian's annual report to the M.I.T. Corporation. In this condensation of his report, it is sufficient to say that the facts provide ample justification for continued confidence that, under the present Administration, the Institute maintains its sound and leading position in the nation's institutions of higher education.



M.I.T. Photo

Reflections — M.I.T. Sailing Pavilion



Arlington Photo Studio

As a part of the 50th reunion activities of the Class of 1903 on the week end of June 12, members of the Class, their wives, and guests were photographed at the Milton home of Frederic A. Eustis, Class Secretary, prior to a journey to Coonamessett Ranch Inn on Cape Cod where the class gathering was held. Seated in the front row on the ground, from left to right, are: Walter P. Regestein, Clarence M. Joyce, Mrs. Margaret H. Shurcliff, James W. Welsh, William O. Eddy, Edward M. Chadbourne, Emmor H. Millard, James R. Killian, Jr., '26, President of M.I.T., Mrs. Roger D. Babson, Karl T. Compton, Chairman of the M.I.T. Corporation, James S. Sheafe, and George B. Wood. The four people seated in the center, in the second row are: Miss Susan L. Clarke, Mrs. LeRoy B. Gould, Mrs. James W. Welsh, and Class Secretary Eustis. Standing, from left to right, are: Frederick K. Lord, Mrs. Clarence M. Joyce, George B. Bradshaw, Curtis R. Gray, Miss Clara Cushman, Mrs. Curtis R. Gray, William E. Mitchell, Charles L. Bates, James A. Cushman, Omar S. Swenson, Mr. and Mrs. Augustus H. Eustis, Ralph H. Howes, Charles B. Cox, Hermon F. Bell, Leroy L. Hunter, Andrey A. Potter, LeRoy B. Gould, Mr. and Mrs. George H. Garcelon, Ichabod F. Atwood, a guest, Mrs. Frederic A. Eustis, Ernest A. Comer, Mrs. Thomas E. Sears, Mr. and Mrs. Alexander Healy, Mr. and Mrs. John J. Dooley, Thomas E. Sears, Mr. and Mrs. Howard S. Morse, Carlton F. Green, J. Tyrrell Cheney, Mr. and Mrs. Paul R. Parker, Mrs. Karl T. Compton, Arthur B. Allen, Mrs. Arthur A. (Sophie T.) Blunt, Roger D. Babson, and George C. Capelle.

Reorientation

IN keeping with its constant vigilance to direct the various curricula of the Institute toward the best possible content for educating students for professional careers, there has developed for some time now, an Institute-wide trend away from subjects primarily concerned with manual skills or details of professional practice, in favor of those that place greater emphasis on the basic principles of science and engineering. Almost always expansion of services and facilities is required when education is placed on a more scientific basis; occasionally, however, such reorientation calls for quite a different approach.

For some time it has been difficult to justify extensive training in surveying field practice when this activity is viewed in terms of education for modern professional engineering. As recorded in the President's Report (see page 28 of this issue), in the future, surveying, with even greater emphasis on basic principles and with broader concepts of application will be taught in Greater Boston rather than at the Institute's Summer Surveying Camp in East Machias, Maine. This decision was made by the Executive Committee of the M.I.T. Corporation in accordance with the recommendations of a special subcommittee of the Visiting Committee on the Department of Civil and Sanitary Engineering, which recommendations are included in the March 2, 1953, report of the Visiting Committee.

Because Alumni — especially graduates of Courses I, XI, and XVII — will be interested in the factors leading to the recommendation that the Summer Camp be discontinued, the report of this Visiting Committee (beginning on page 31) is published at the earliest possible moment.

Speer Becomes Associate Dean

EFFECTIVE with the fall term of 1953, William Speer, formerly headmaster of the Loomis School at Windsor, Conn., was appointed associate dean of students at the Institute, with duties which will emphasize the needs and welfare of individual M.I.T. students. James R. Killian, Jr., '26, M.I.T. President who announced the appointment, noted that the new auditorium and chapel now being built at M.I.T. would provide Dean Speer with new facilities that will give the M.I.T. community a "meeting house" on which to focus its spiritual and humanistic interests.

In association with E. Francis Bowditch, Dean of Students, Dean Speer will correlate all counseling activities at the Institute and will organize and coordinate discussions bearing on the development of a spiritual program. He will also serve as Faculty adviser to the religious department of the Technology Christian Association.

Mr. Speer, a native of Englewood, N. J., where he was born in 1910, was educated in the Englewood public schools, the Hotchkiss School, and Princeton University, from which he was graduated in 1933. At Princeton he majored in philosophy, and was a member of the junior varsity crew. From 1933 to 1941 he taught at the Asheville School in North Carolina and the Shady Hill School in Cambridge.

In 1941, Mr. Speer served as assistant to the headmaster of the Gilman Country Day School in Baltimore, until 1942 when he entered the United States Naval Reserve. Upon his return to civilian life in 1946, Mr. Speer served as director of admissions and director of student life at Rutgers University. He served the Loomis School as headmaster from 1949 to 1952.

Herman R. Kurrelmeyer: 1876-1953

ANNOUNCEMENT is sadly made of the death on August 28, 1953, of Herman R. Kurrelmeyer, Professor of German, Emeritus. Professor Kurrelmeyer retired in 1947 after more than 40 years as a teacher in the Department of Modern Languages at the Institute.

He was born in Osnabrück, Germany, in 1876, and was educated at the Johns Hopkins University, where he was awarded the degrees of bachelor of arts and doctor of philosophy in 1899 and 1902, respectively. He joined the staff of the Institute in 1902 as an instructor in modern languages, and was named assistant professor of German in 1912. Three years later he was made an associate professor, and was appointed professor of German in 1927.

New Appointments

APPOINTMENTS of five new members of the Faculty at the Institute have been announced by James R. Killian, Jr., '26, President, during the summer. The new appointments name Wroe Alderson to be visiting professor in the School of Industrial Management for the fall semester, Edward G. Bennion to be visiting professor in the Department of Economics and Social Science, Gordon R. Williams, '29, to be associate professor in the Department of Civil and Sanitary Engineering, Robert R. Rathbone to be assistant professor in the Department of Humanities, and Charles W. Rosen as assistant professor of modern languages.

Wroe Alderson, partner of Alderson and Sessions, Philadelphia marketing and management counsel, will participate in the development of the program of research in marketing currently being undertaken by the School. He will also teach on the graduate level.

Professor Alderson has received several distinguished honors in this field, including annual awards from the American Marketing Association in 1947 and 1949 and the Pabst Award of 1944. Born in St. Louis, Professor Alderson holds the degree of bachelor of arts from George Washington University; he has done graduate work at that institution and at the University of Pennsylvania.

A partner of Alderson and Sessions since 1944, he was a business specialist with the Department of Commerce from 1925-1934 and a market analyst with the Curtis Publishing Company from 1936-1943.

Professor Bennion, Head of the General Economics Division of the Standard Oil Company of New Jersey received the degrees of bachelor of arts (1930) and master of arts (1934) from the University of California at Los Angeles, and the degree of doctor of philosophy from Harvard University in 1942. He was an instructor and tutor in economics at Harvard University from 1938 to 1943 and has been a lecturer in economics in Columbia University's Graduate School of Business since 1948.

Dr. Bennion joined Standard Oil of New Jersey in 1943 as a staff economist and has been head of the General Economics Division since its establishment in 1945.

Professor Williams brings to M.I.T. extensive experience in civil engineering projects overseas as associate and chief hydraulic engineer with the firm of

Knappen-Tippetts-Abbott-McCarthy, consulting engineers of New York. Since 1946 he has had charge of field investigations and hydraulic and hydrologic studies for power, irrigation, and flood control developments in foreign countries as well as in the United States. Previously, beginning in 1939, he was associated with U.S. Engineer Offices in Baltimore, Wilkes-Barre, Syracuse, Washington, D.C., and Providence.

At M.I.T. Professor Williams will teach courses in hydraulic engineering and hydrology. He was graduated from the Institute in 1929 with a bachelor of science degree in civil engineering. He has served as lecturer in civil engineering at Columbia University and is a member of the Hydrology Section of the American Geophysical Union and an associate member of the American Society of Civil Engineers. Professor Williams was awarded the James Laurie Prize of the American Society of Civil Engineers in 1944.

Professor Rathbone first came to M.I.T. in 1948, and since then has been serving as technical writer for the Digital Computer Laboratory and other research activities. While teaching in this field, beginning this fall, he will continue part-time association as technical writer with M.I.T.'s Lincoln Laboratory.

A native of Exeter, N. H., Professor Rathbone attended Phillips Exeter Academy. He holds degrees from Middlebury College (B.A., 1939) and Harvard University (M.A., 1947). Before coming to M.I.T., he held teaching positions at the Gould Academy in Bethel, Maine, and in high schools in Glens Falls, N. Y., and Swampscott, Mass. During World War II he served as a lieutenant with the U. S. Naval Reserve from 1942-1946. Professor Rathbone is author of several technical articles.

Dr. Rosen will be responsible for basic courses in history and literature which will be taught in the French language beginning this fall to a few selected M.I.T. freshmen. This unique experimental program is made possible by a grant from the Rockefeller Foundation.

Dr. Rosen was born in New York City in 1927 and attended the public schools there. He received his bachelor of arts degree with highest honors from Princeton University in 1947 and continued his studies at Princeton from 1947 to 1951 holding four distinguished fellowships in modern languages and literature. He was an assistant in instruction in the Princeton Department of Modern Languages and Literatures from 1948 to 1950, and received the M.A. and Ph.D. degrees from Princeton in 1949 and 1951, respectively. Dr. Rosen made his debut as a pianist in New York in March, 1951.

A Transit View

MEETING at the Institute on March 2 and 3, 1953, members of the Visiting Committee on the Department of Civil and Sanitary Engineering* included a visit to the laboratories as a part of the program of the two-day meeting, and concluded their activities

* Members of this Committee for 1952-1953 were: Thomas C. Desmond, '09, chairman, William J. Orchard, '11, Eugene L. MacDonald, '13, Alfred T. Glassett, '20, George J. Leness, '26, John M. Kyle, and George R. Rich.



Bob Dixon

Celebrating the enjoyable occasion of a 40th reunion, 101 members of the Class of 1913 and their wives gathered for the week end of June 12, 1953, at the Oyster Harbors Club in Osterville. Reading from left to right are: First Row—Frederick W. Lane, Francis H. Achard, Silas H. Champlin, William R. Mattson, Mrs. Ellis W. Brewster, Clarence J. Berry, Mrs. Thomas Bain, Miss Neva Bain, Walter P. Muther, Harold E. Crawford, Charles E. Trull, Mrs. Nathaniel McL. Sage, and Nathaniel McL. Sage. Second Row—Mrs. Robert D. Bonney, Max L. Waterman, Eugene L. MacDonald, Paul C. Warner, Gordon G. Howie, Joseph H. Cohen, David Stern, Robert W. Weeks, Clarence W. Brett, Frederick D. Murdock, William A. Ready, R. Charles Thompson, Hilding N. Carlson, Nathan H. Poor, 2d, Stanley H. Davis, Kenneth W. Reed, John B. Farwell, Geoffrey M. Rollason, and Henry W. Dew. Third Row—Mrs. Max L. Waterman, Mrs. Robert W. Weeks, Mrs. Gordon G. Howie, Mrs. Paul V. Cogan, Mrs. Stuart J. Eynon, Mrs. David Stern, Mrs. Joseph H. Cohen, Mrs. Charles H. Wood, Mrs. Harold E. Crawford, Mrs. Clarence W. Brett, Mrs. Geoffrey M. Rollason, Mrs. Francis H. Achard, Mrs. Hilding N. Carlson, Mrs. Nathan H. Poor, 2d, Mrs. Fred C. Hersom, Mrs. Kenneth W. Reed, Mrs. John B. Farwell, Mrs. R. Charles Thompson, Mrs. George P. Capen, and Mrs. Stanley H. Davis. Fourth Row—Allen F. Brewer, Harold M. Rand, Edward H. Cameron, Raymond B. Haynes, Fred C. Hersom, Paul V. Cogan, James G. Russell, Arthur L. Townsend, Percy G. Whitman, A. Laurence Brown, Robert D. Bonney, George P. Capen, and Walter R. Bylund. Fifth Row—Mrs. Allen F. Brewer, Mrs. Henry W. Dew, Mrs. Charles W. Gotherman, Mrs. Harold M. Rand, Mrs. Herbert G. Shaw, Mrs. Edward Hurst, Mrs. Percy G. Whitman, Mrs. A. Laurence Brown, Mrs. Gilbert R. Pardey, Mrs. Bion L. Pierce, Mrs. Howard S. Currier, Mrs. William N. Eichorn, Mrs. William A. Ready, Andrew Vogel, Mrs. William R. Mattson, Miss Janet Mattson, Thomas S. Byrne, Mrs. Laurence C. Hart, and Laurence C. Hart. Sixth Row—Robert J. Tullar, Stuart J. Eynon, Charles W. Gotherman, Herbert G. Shaw, Ellis W. Brewster, Edward Hurst, Emerson L. Bray, Kenneth A. Scott, Charles H. Wood, Morris F. Hall, Gilbert R. Pardey, Bion L. Pierce, Mrs. Clarence J. Berry, William N. Eichorn, Howard S. Currier, Mrs. Burton L. Cushing, and Burton L. Cushing.

with a luncheon and final session at the Faculty Club. Also present at various of the Committee gatherings were: Edward L. Cochrane, '20, Dean of the School of Engineering; Karl T. Compton, Chairman of the Corporation; Walter H. Gale, '29, Secretary of the Institute; James R. Killian, Jr., '26, President; Robert M. Kimball, '33, Director, Division of Business Administration; Malcolm G. Kispert, 2-44, Executive Assistant to the President; and Professor John B. Wilbur, '26, Head of the Department.

Last year, a committee under the chairmanship of Eugene L. Macdonald, '13, studied instruction in surveying with special reference to field work at M.I.T.'s summer surveying camp at East Machias, Maine. In keeping with its constant vigilance to direct the various curricula of the Institute toward the education of students for professional engineering, there has developed an Institute-wide trend away from subjects primarily concerned with manual skills or details of professional practice, in favor of those that place greater emphasis on the basic principles of science and engineering. In keeping with this general trend, it appears possible to improve the curriculum in Civil Engineering by reorienting instruction in the important subject of surveying toward broader and more fundamental objectives. While the measurement of angles and distances that define the surface of the

earth would form an important part of this new concept, other types of measurement and data processing in civil engineering would also be treated. Familiarity with manual means of taking measurements is essential, but a broad treatment of the principles involved appears to supersede, in relative importance, the development of manual skills or field work as part of the formal educational program.

If instruction in surveying is reoriented as suggested, the theory of surveying, together with less extensive formal training in surveying field work, might be taught at Cambridge in the regular school year. As a corollary to this suggestion, the present program of summer jobs for Civil Engineering students should be continued aggressively, so that the limited formal training in field work will be strengthened by on-the-job experience. If, in addition to summer employment, there is need for a summer course in surveying field work, on an optional basis, consideration should be given to such a program.

Something will of course be lost in giving up the camp, which so many of the graduates of this Department look back upon with sincere affection, but the majority of this Committee believes that the Course in Civil Engineering would be strengthened by these changes in the teaching of surveying, and therefore
(Continued on page 34)

BUSINESS IN MOTION

To our Colleagues in American Business ...

Many people think that copper is just copper, and brass is brass, whereas there are several types of copper, and many kinds of copper alloys, all available in various forms, finishes and tempers. Choice of the correct metal, temper, shape and fabrication methods often makes a tremendous difference. Here are some examples.

- A communications-equipment manufacturer began development of a new relay. The original design called for a rectangular copper tube of a size that could not be made economically. The Revere Technical Advisory Service and our Methods Department discussed this problem with the customer at considerable length. Design changes were made which satisfied everybody, and made the relay commercially practical at no sacrifice in performance.

- A lock maker was generating a lot of scrap in machining cylinder lock sleeves from bar. We suggested tube, but analysis showed only an even break on cost of material. Further study, however, revealed that tube would bring about substantial savings, due to longer tool life, less collet wear, less scrap to handle, and a smaller inventory of metal for the same output. The customer switched to tube to obtain these economies.

- When a maker of electrical lugs and terminals found a pile of 40,000 rejected parts we were asked for advice, though the copper strip did not come from Revere. The Research Department worked all night, and reported embrittlement of the metal caused the cracking, and in addition, brazing practices were

incorrect. The proper metal and better brazing licked the problem.

- We had the opportunity to study the fabrication methods employed by a customer, and found they could be improved materially. Changing from silver soldering to welding, and working out better jigging methods cut fabricating costs by an amazing 90%.

- When a competitive metal wouldn't work for a soap dish maker because it cracked at the bottom corners, Revere was called in. The Technical Advisory Service studied the dish, which is of the wall-recess type, and also the drawing process. Revere's 70-30 brass was recommended in a specified temper. This cured the difficulty at once.

- Once in a while it is not the metal at all that causes difficulty. A large manufacturer of flashlight cases was troubled with staining of the brass. The Technical Advisory Service and the Methods Department could find nothing wrong with our

metal, so asked the oil company engineers to collaborate. They changed the die lubricant, thus solving the problem.

One of the important facts about American business is that it is competitive, and an important part of competition is the endeavor to give a little extra service. Often it turns out to mean a lot, as in the cases just cited. Please remember that your suppliers, no matter who they may be, are eager to give you the benefit of their special knowledge. Call on them for it and let them supply you with much more than materials.



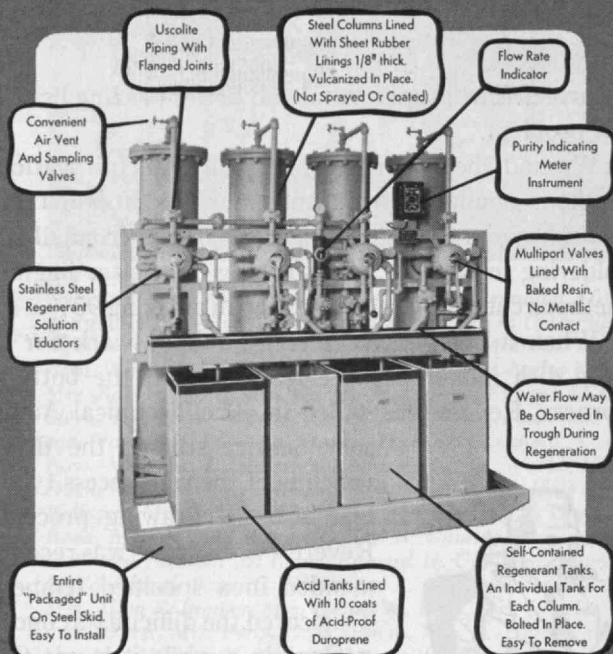
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THE INSTITUTE GAZETTE

(Continued from page 32)

reluctantly concludes that the summer surveying camp at Machias should be discontinued. This conclusion is in no sense a criticism of those who have been responsible for its operation; indeed, this Committee wishes to commend Herman J. Shea, '33, Associate Professor of Surveying, and his associates for their creditable work at Machias.

Transportation, for which the civil engineer plans, designs, and constructs the ground facilities, occupies so vital a position in our civilization that it touches on every sphere of human endeavor. The congestion of traffic, a single phase of transportation, has been called the first of the five great problems confronting the civil engineer.

Because of the retirement in June, 1954, of Professor John B. Babcock, 3d, '10, Head of the Division of Transportation and Surveying, the appointment of a successor is under consideration — a matter on which the future of this division is largely dependent.

While the Department now offers undergraduate and graduate subjects in soil mechanics, it would be desirable to expand the program so that a graduate student working for a master's degree could elect a program of studies centered on soil mechanics and its related subjects. Donald W. Taylor, '34, Associate Professor of Soil Mechanics, proposed a new arrangement of graduate subjects, dependent on the addition of a new Faculty member. The Committee believes that the importance of soil mechanics warrants this expansion.

For the past two years this Committee has recommended a substantial special appropriation to complete the basic equipment for instruction and research in the new Hydrodynamics Laboratory. It was only possible for the Administration to appropriate \$2,100 during 1952-1953, and therefore this Committee brings the matter to attention once more, and urges that it be given a high priority.

In conclusion, the Committee is again pleased to report that the Department continues to grow and to flourish under the leadership of Professor Wilbur. Certainly its recent accomplishments and current condition are such that it has our complete confidence.

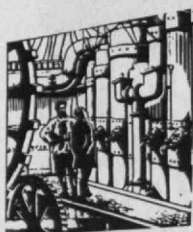
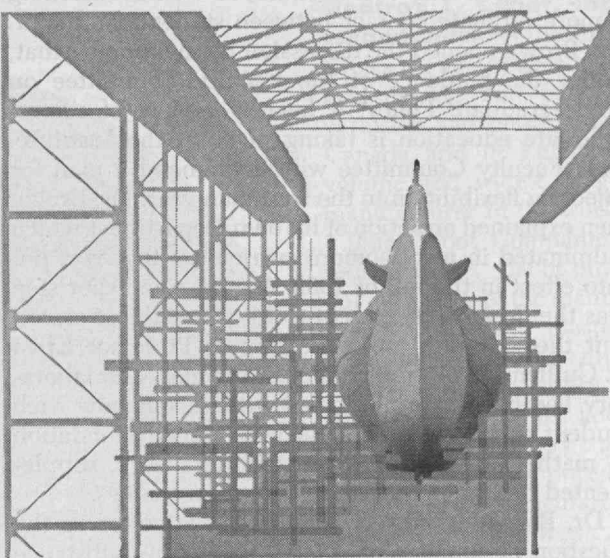
The report of this Committee, summarized above, was made available for publication in The Review on July 29, 1953.

Electrical Engineering Conversions

THE Visiting Committee on the Department of Electrical Engineering* met at the Institute with Gordon S. Brown, '31, new Head of the Department, on February 19, 1953. Joining the Committee for most of the session and a tour of that part of the Institute being converted to provide better laboratories and

(Continued on page 36)

* Members of this Committee for 1952-1953 were: Harold B. Richmond, '14, chairman, Francis J. Chesterman, '05, Thomas J. Killian, '25, Edward J. Poitras, '28, Edwin H. Armstrong, Harald T. Friis, James W. McRae, and Gwilym A. Price.



FANTASY into FACT

In 1869, novelist Jules Verne created a scientific fantasy about the "Nautilus", a fictional submarine capable of traveling "Twenty Thousand Leagues Under the Sea". Today, a real "Nautilus" is under construction by General Dynamics. When launched in 1954, the "Nautilus" will be able to cruise *indefinitely* — propelled by atomic power. Recently at our Electric Boat Division yards, the Secretary of the Navy laid the keel plate of the "Sea Wolf", a nuclear powered submarine of entirely *different* design!

Since 1880, divisions of General Dynamics have been surpassing yesterday's fiction with today's fact . . . building electric motors of advanced design . . . building supersonic aircraft . . . building atomic powered submarines . . . successfully adapting new forms of power to military and industrial uses.

GENERAL DYNAMICS

DIVISIONS



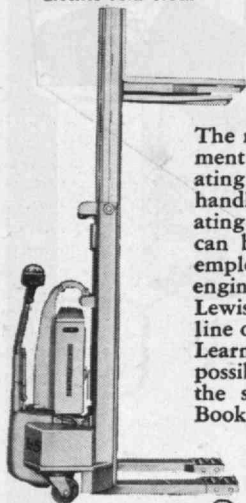


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THE INSTITUTE GAZETTE

(Continued from page 34)

offices for the Department were officers of the Administration — Karl T. Compton, James R. Killian, Jr., '26, Julius A. Stratton, '23, Edward L. Cochrane, '20 — and members of the Department.

Substantially all of Building 10, beneath the old Central Library, is being arranged for Department use. While not providing materially greater space, the new arrangement (which includes a regrouping of laboratory facilities) will make possible a consolidation of academic activity that the Department has not enjoyed for nearly two decades, as well as affording a more intimate contact between students and staff. Dr. Brown opened the discussion by mentioning that, under the guidance of the Faculty Committee on Undergraduate Policy, a healthy review of undergraduate education is taking place at the Institute. This Faculty Committee will recommend a plan for injecting flexibility into the freshman year. Dr. Brown then explained an action of his own Department which culminated in a sophomore curriculum that was put into effect in the fall of 1952. A most significant step was the decision to present a full-year subject on circuit theory under the leadership of Professor Ernst A. Guillemin, '24. Instruction in both class and laboratory has been carefully co-ordinated, and now each student enters his junior year with a good foundation in mathematics, physics, and circuit theory, supplemented by humanities and applied mechanics.

Dr. Brown asked the Committee's attention to the question of junior and senior curriculum substance and options (which the Department has been reviewing) since the Department was about to initiate a radical revision of its policies and curriculums, particularly in the general power area. He emphasized the concern among electrical engineering educators and leaders of industry over the fact that the field of electric power is not attracting a sufficient number of students with adequate intellectual ability to meet the needs of the time. Actually what seems to be needed is a broadening of the base of scientific substance in this field, and an upgrading of its professional content in order that bold creative exploitation of energy conversion and energy utilization techniques can make possible the continued expansion of one of the key elements in our economy.


(Concluded on page 38)



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The Committee believes that two tasks face departments of electrical engineering. The first task is to make clear to industry and public utilities in particular that employment offered to graduates in the electric power field is rarely as professional as that offered by employers in the electronics field; that the government's attitude toward public utilities should not inhibit creative professional thinking; and that on-campus research under their sponsorship is essential. The second task immediately is to make its own on-campus environment a creative one. As Dr. Brown points out, the function of a university is not merely to teach effectively the known art of the day, but also nourish creative activity to guide the future.

The future program of the Department is aimed at both of these tasks. Specifically, the Department will divest the curriculum of the old traditional substance of instruction in power, and replace it by a broader and more modern scientific substance. A new subject, "Control and Conversion of Energy" (to be taken with "Electronic Circuits") will be offered during the junior year. Dealing initially with magnetic, dielectric, and conducting materials, with the importance of materials in industry, this new subject will aim to show how engineers exploit the properties of materials in a creative way, to solve broad engineering problems. Much new work, for example, magnetic and dielectric amplifiers and transducers, will be presented. The treatment of components in the steady state will be subordinated to a treatment of the dynamics of energy conversion at the systems level.

As much of the traditional instruction in machinery will be discontinued, a new concept for laboratory instruction on energy conversion devices and systems will emerge. Laboratory instruction will co-ordinate with classroom instruction. Much of the equipment in the present electrical machinery laboratory is inadequate, and new equipment will be needed. The new subject "Control and Conversion of Energy" will aim to bring about a closer coupling between science and engineering.

Allied to the problems of curriculum substance is the subject of options. At present, students are expected to select their options during the sophomore year. The new program will maintain substantially a core curriculum, stronger in science than heretofore, through to the end of the junior year; thus, undergraduates may defer a choice until they are seniors.

To support the work in the power field — redefined as the Field of Energy Conversion, Control, and Utilization — a strong program of creative graduate research is in process of development.

The Committee concluded that the recommendations of Dr. Brown are sound, and although the work in the fourth year was not yet ready for formal adoption, the Committee urged that the proposals as outlined be referred to the Institute Executive Committee for adoption.

The Committee's report, as summarized above, became available for publication in The Review in July.

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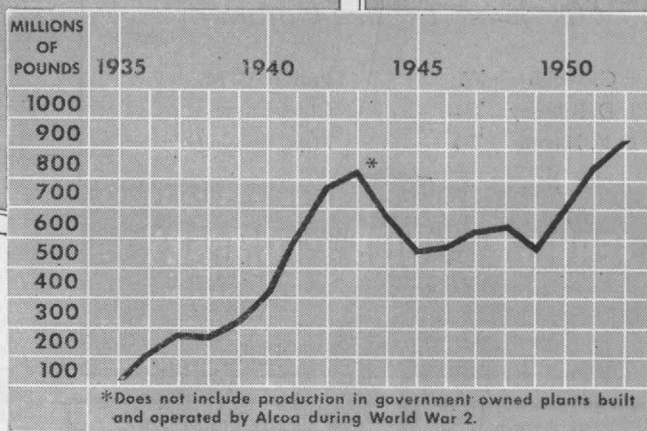
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ENGINEERS AND ENGINEERING EDUCATION

(Continued from page 16)

them to be spent in localities and for purposes of which they do not approve. By this action government destroys the incentive to labor, to save, and to risk — the foundation stones of our free economy.

It appears that we are now running away from the ideas which have accounted for everything peculiarly good about America. We Americans are now letting the Old-World ideas — from which we originally ran away — replace our peculiarly good American ideas. Not only is our agency of force — government — without practical limitation, except as political expediency suggests, but millions of Americans in every walk of life — teachers, wage earners, clergymen, captains of industry, farmers, doctors; in short, persons from all categories — are actually inviting the agency of force to increase its activities. They do this by demanding that government subsidize them, their businesses, or their communities in order to "promote the general welfare." It appears that faith in what man can accomplish voluntarily, if his creative energies are free, is declining. Faith in what man can accomplish if coerced by the agency of force is increasing. If there are any corporate managers who doubt this, let them look at their own annual reports and observe the trend in the income-tax ratio over the past 40 years.

In 1909 (the first year for which I have the figures) the taxable income of corporations reporting net income was 3 billion 590 million dollars. The federal income tax was 21 million dollars, or only ⅓ of 1 per cent of taxable corporation income. In 1951 the taxable corporate income was 42 billion 900 million dollars, and the federal income tax was 23.4 billion, or 55 per cent. If to the federal income tax there are added other federal taxes and state and local taxes, the total tax bill becomes 32.7 billion, or 76 per cent of the total income of business firms.

Thus we see that, from 1909 to 1951, the participation of the federal government in the earnings of corporations increased from ⅓ of 1 per cent to approximately 55 per cent. And if the comparison is made between the amounts paid to the federal government and the amounts paid to the owners of the business — the stockholders — the results are even more shocking. In 1951 the total of the income tax payments to the federal government, by the largest company in each of the 20 largest industries, was three times

(Continued on page 42)

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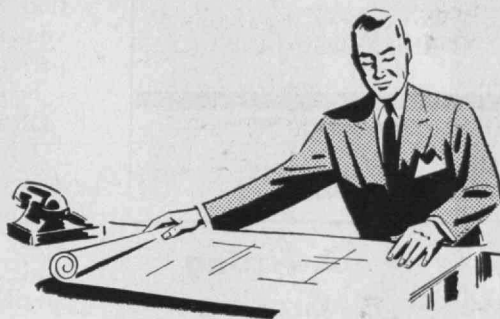


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ENGINEERS AND ENGINEERING EDUCATION

(Continued from page 40)

the total amount that was paid by them to the owners of the businesses. That is, for every dollar set aside for federal taxes and dividends by these companies, \$0.75 went to the federal government and \$0.25 went to the stockholders. After that, an additional generous cut of the dividend payments was taken directly from stockholders by the government for personal income taxes. How long will American investors be willing to save and to risk their savings in American industry in the face of such powerful discouragement? And whence will come the increased quantities of the products of industry and the new jobs necessary to serve a rapidly increasing population if the risk-taking investors disappear?

It is quite evident that the function of government, as originally conceived by the leaders of the American Revolution, has been vastly corrupted in recent years. The blame lies with all of us. We have allowed those liberties which were so jealously guarded by the founding fathers to go by default in our preoccupation with the pursuit of material comforts and conveniences. We are suffering the fate of all men who permit others to do their thinking for them.

So much then for the function of government. What shall we say about our duty to God?

I have long believed that, in a completely moral society (one wherein the behavior of all persons is in conformity with the absolute values of Christian morality as summarized by the Ten Commandments and the Golden Rule), there would be no need for any law or for any formal government. Since man is an imperfect creature and it is clear that all individuals will not conform to this moral code at all times, government is provided to apply the restraints necessary to keep liberty from turning into license, to prevent some men from interfering with the freedom of others.

If we think of complete conformity with the absolute moral values, those changeless and timeless rules for human behavior, as the "base line," it becomes evident that as we humans move farther and farther away from that base line, we need more and more government restraint to keep us from destroying each other. Finally, when we reach the extreme of complete disregard for all moral law and we give free rein to our animal instincts, it is clear that we can survive only in an absolute dictatorship where not only our actions, but our very thoughts, are controlled by the force of government.

What is the outcome of such a state? As Lord Acton, the British historian, has so well stated: "All power tends to corrupt. Absolute power corrupts absolutely." History has shown that in such states the dictatorial power is eventually corrupted and society descends to the level of a completely immoral anarchy. This is the story of the Dark Ages — that thousand-year period of degradation of humanity.

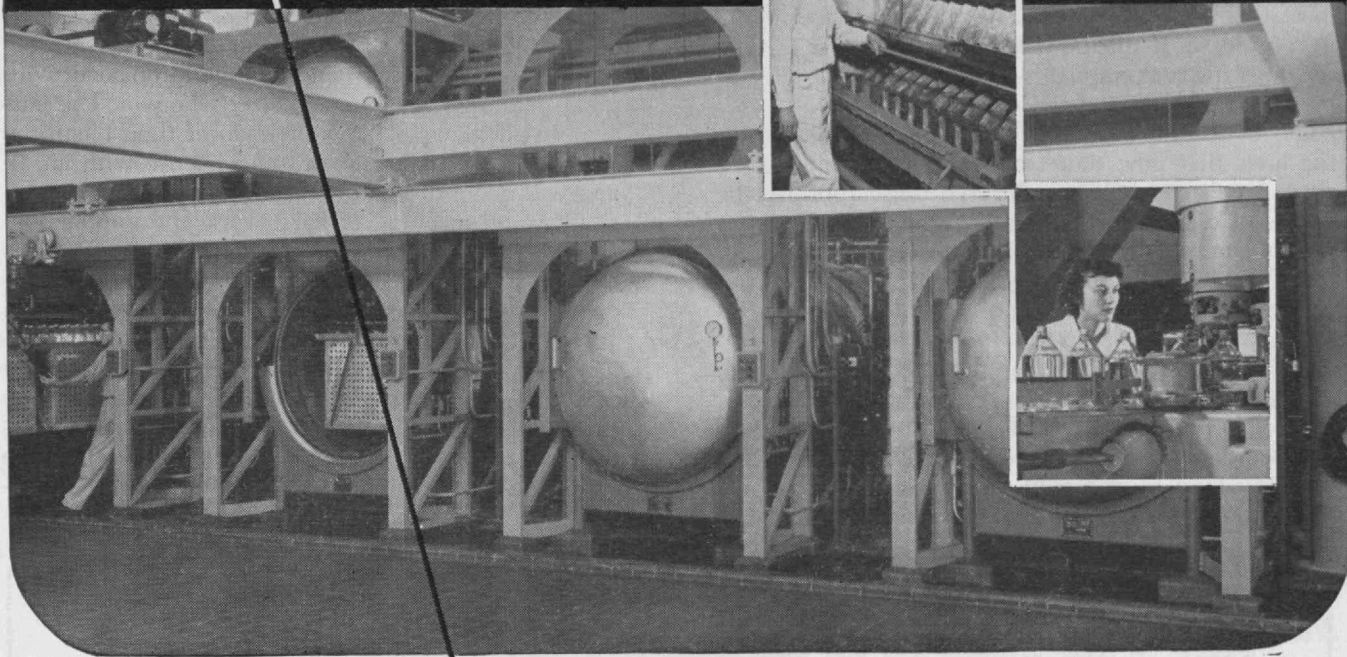
This then is the function of God, or of the moral law, or of natural law, as you may wish to call it; namely, to enable us to use our liberty in a manner

(Concluded on page 44)

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ENGINEERS AND ENGINEERING EDUCATION

(Concluded from page 42)

such as to preserve our liberty. Only if we establish our relationships to God and to our neighbors on the highest level of service to both can we avoid dictatorship. That, I believe, is why we see so many references in these troubled days to "faith and freedom." Men are beginning to see that without faith there can be no freedom!

Now, you may ask, what has all this to do with engineering and engineering education? I believe it is this: engineering is generally conceded to be the most realistic of all professions, the most "practical," if you please. If this be true, and I believe it is, then we must instruct engineers in the function of government and the function of God, since without a knowledge of those functions and a conformity with the laws that flow therefrom, all engineering "good works" will come to naught. We must appraise the values of engineering works in terms of their effects on *both* our material and our spiritual standards of living. Only a working knowledge of the function of government and the function of God will enable us to make such an appraisal!

This point of view may be regarded as pure idealism, and too lofty for the everyday "practical" problems of living. But the background of an experience of more than 40 years in the practice of engineering, in many lands and among many peoples, gives me the deep conviction that *only the ideal is practical.*

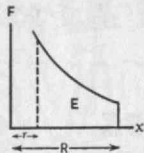
APPRAISAL OF SUBURBAN MIDDLE CLASS LIFE

(Continued from page 21)

great deal of emotional instability enters into the home regime, varying between periods of hysterical attempts at discipline and those bordering upon euphoria wherein comradery and the joy of living almost reach the psychotic. In such a high neurotic environment the children are spoiled, indulged in, and selfish. Usually they get their ways, unless the parents are tyrants. Tyrants are they who have the fortitude to withstand the debilitating surroundings and raise their children with more than lip service to morals and spiritual and religious values.

As might be expected, violent disagreements between suburban parents and their children occur with great regularity but it is the latter who win. The parents dread the loss of the affection of their offspring. These are bred amid luxury and license with an almost complete disregard for the significance, responsibility, and meaning of hard work and application. Household chores are beneath their dignity, study is for the grinds. Respect is for weaklings. Law and order exist for the poor on the other side of the tracks. When one observes the growth and development of suburban children, it becomes only too clear why it is that rarely does an American business flourish beyond the third generation of family ownership. The reason becomes clear for the great vertical mobility within the American class structure. The children learn to de-

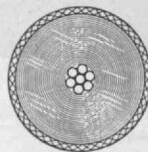
(Continued on page 46)



THIS GRAPH shows the relative potential gradient in cables where: Area E represents the impressed voltage, r is the radius of the conductor, R is the radius of insulation, F is the volts per unit stress at any point x distance from the center of the cable.

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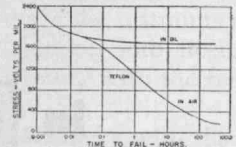
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PFGV-10000-20	20	7	10000	.160	.050	1.31	415	200	65.00
PFGV-5	20	7	12000	.205	.074	.60	403	162	100.00
PFGV-13000-14	14	41	13000	.240	.075	1.13	319	173	115.00
PFGV-7	20	7	13000	.280	.100	1.86	380	130	115.00
PFGV-15000-16	16	19	15000	.280	.092	1.48	373	163	125.00
PFGV-10000-10	10	37	13000	.330	.090	.88	230	144	175.00
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TEST #2. AT AN ARMED FORCES TEST LAB

Since a terminal has but a few milliohms resistance, this test required a special transformer to match this low impedance to the input of the amplifier, sensitive to levels of 0.2 micro volt. 60 AMP solderless terminals crimped to short lengths of wire in series, a similar number of carefully soldered joints, and a single piece of solid wire of equivalent R, were compared.

No noise difference was detectable between any of the three.

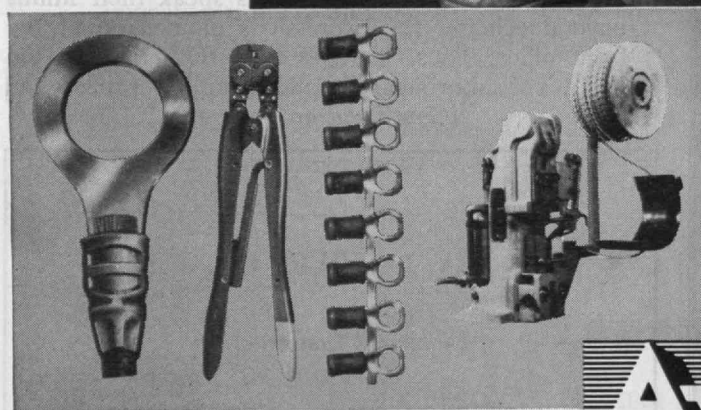
TEST #3 AT A PROMINENT UNIVERSITY LAB

7,000 AMP solderless connectors were crimped to short lengths of wire in series making a chain of terminals 340 feet long (see illustration). After aging for two years in an unfavorable atmosphere these 14,000 connections in series were tested at radio frequencies up to 20 megacycles.

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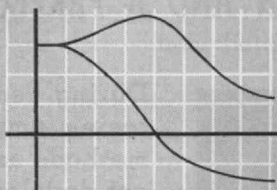
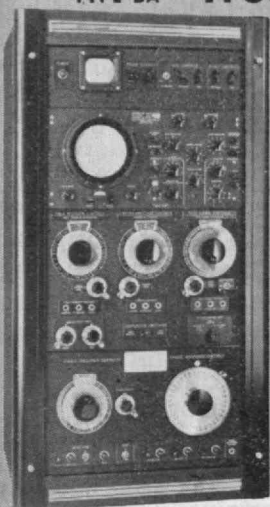
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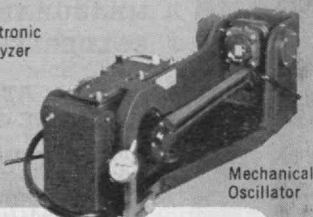
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APPRAISAL OF SUBURBAN MIDDLE CLASS LIFE

(Continued from page 44)

mand — and to expect to be satisfied — without knowing how to give, how to share, or how to strive and struggle for their own needs. The parents have been unable to inculcate in their children self-esteem or the pride of workmanship, although they have taught them to howl about the pride of ownership.

The growth of power of Parent-Teachers Associations in the suburbs is traceable to the disintegrating influence of the family unit. Religious observance and church attendance, which had been sincere personal obligations, have degenerated into arduous tasks, rarely indulged in except under compulsion or upon the minimum of holydays. Into this void have plunged the educators, offering every conceivable inducement in the name of better parent-teacher relationships. The lists of programs and activities are so varied and far-reaching that the original purpose is long forgotten and buried under a plethora of titles and causes. The insinuation of such suburban educators, into the life of the communities, is producing profound schisms and deep-rooted resentments. A new bureaucracy is in the process of creation, and those who rise to challenge it are invariably insulted as "Fascists" or "dupes of the real estate lobby."

Clever manipulators within suburban school systems are rapidly absorbing, under their aegis, many of the social functions of the home and/or the church. Such transference of obligations is supinely accepted and welcomed by fathers and mothers who prefer that others bring up their children. Such freedom from the task of molding character presents them with added leisure for teas, bridge, golf, the races, vacations, and other meaningless waste of time and lives.

Parent-Teacher organizations have a basically laudatory purpose. However, if the school superintendent has a dominant, willful character, the local suburban group degenerates into naught but an audience for his pontifical pronouncements. The suburban women flock at his beck and call, always with the dread in their souls that independent expression of thought would be considered radical enough to reflect adversely upon the scholastic standings of their children. Rarely do the teachers speak their minds beyond echoing the expressions enunciated at the front office. Thus, it arises that, through fear, the P.T.A.'s of suburbia accomplish naught but reflect the

(Continued on page 48)

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APPRAISAL OF SUBURBAN

MIDDLE CLASS LIFE

(Continued from page 46)

character and beliefs of the school superintendent. Suburban parents, through their spineless acquiescence, irreparably harm the education of their children. They salve their consciences, however, by feeding themselves at numerous P.T.A. teas and affairs. As a group, suburban women are ready to allay anxiety through oral gratification.

All political observers recognize the curious phenomenon that when Mr. and Mrs. Democrat move from the city, through a peculiar alchemy, almost invariably they metamorphize into Mr. and Mrs. Suburban Republican. Above the Mason-Dixon line, the Democratic party claims to represent the masses and for years has advocated reforms for the benefit of the common man, whereas their antithesis is the conservative Republican party. While in the city, the man and wife had not ascended to their position of economic status and were still of a mind close to the thinking of the lower-class level. They themselves were not far removed from it, and could well afford to be sympathetic to Liberal plans — but once they cross the border, all changes. They are now on the other side, physically and spiritually. The insecurity inherent in middle-class success demands conservatism. Fear and selfishness indicate it. The Republicanism of the suburbanite is completely different in character from that of the remainder of the state, where individualism is the source of its power rather than the insecurity of suburbanites.

A corollary that follows from the thesis that the well-to-do suburbanites are conservative is that they must necessarily be conformists. Acceptance by neighbors is a prime essential to compensate them for their feeling of insecurity. This is evident in the operation of that tool of social control, gossip, about which I had written previously.[†] They dread being apart, or dissimilar — a condition that little disturbed them when they were city dwellers, for the walls of their apartment cages segregated them from all others in the building. But once in the suburbs they need each other, for the spiritual uplift implicit in numbers. They must not be alone! In the city there were always ever-present relatives to call upon in an emergency, while in the suburbs they find themselves quite alone. For many reasons, therefore, must Mrs. Suburbs con-

[†] "Gossip as an Element of Social Control," *The Technology Review*, 52:88 (December, 1949).

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form, for the problems essentially devolve about her when help is needed. Paid workers can never substitute for the loyalty and experience of a mother or mother-in-law when illness strikes.

Mr. and Mrs. Suburbs entertain prodigiously, and in turn, receive reciprocal invitations. But for all their parties, dinners, and dates they enjoy few friends. The acquaintanceships are often upon a superficial level, resting essentially upon convenience of neighborly proximity, rather than upon a community of interest and understanding. Suburban gatherings are devastatingly dull and shallow, held together by a mortar fashioned of food, drink, and gossip. Rarely does intellectual conversation or interchange of views hold sway for any protracted length of time. Card games generally follow food, prolonging an intellectual void.

Some ambitious hosts attempt to inject life into their gatherings through the addition of semiprofessional talent. Thus a magician may entertain, as an invited guest, or a local lion may expound. But even these shots into the arms of suburban comradeship are obviously superficial. When the evening is over, all look forward with dread to the next one, knowing full well that soon it will be their turn. The latter remarks do not apply if the participants enjoy evenings of cards with jokes and drinks on the side. Such fare can be had constantly at the home of most suburbanites — if it is liked to the exclusion of any other social form of communal relaxation and gathering.

Frequently it happens that the economic position, which the suburbanites attained, evolved from fortuitous circumstances combined with a dogged perseverance and constant application on the part of the husband. He might be lacking a college education — a fact which apparently did not deter him from becoming successful in business. His wife, however, usually realizes that such an education is one of the established steps recognized in the process of vertical social mobility. Whereas her husband might have been lucky, Mrs. Suburbs prefers that her sons be given every opportunity, if for no other reason than to help the luck. Her husband often sees no especial value in a college education, as he needed none to ascend to his own position in life. If he operates an enterprise employing people, his son, as often as not, enters the business upon graduation from high school. If Mrs. Suburbs has her way, the boy continues into college, even if it means going to an easy one. However, with the lure of a ready, lucrative position, seldom does he complete his education. Wealth does not connote enlightenment.

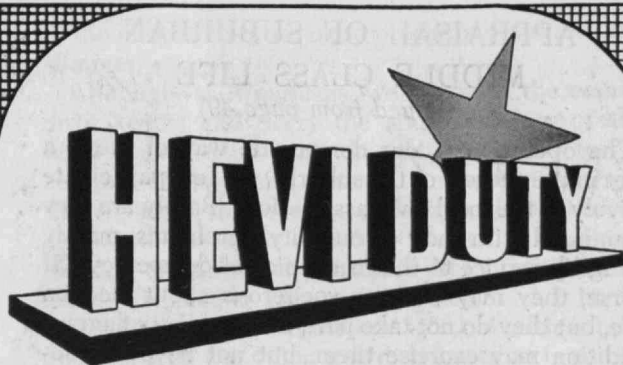
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APPRAISAL OF SUBURBAN MIDDLE CLASS LIFE

(Continued from page 49)

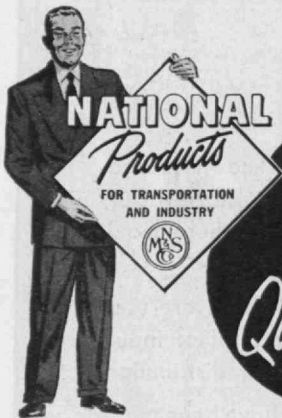
The operation of our democratic way of life is a facet in the success of the suburbs, yet few participate actively in the local civic associations. Rarely are they acquainted with their community's problems, merely giving lip service to the mechanics of democracy. Of course, they may become vociferous about election time, but they do not take part. An especially flagrant condition may exorcise them, but not beyond challenging someone else to do something about the situation. If it should ever come to pass that either man or wife becomes deeply concerned, he or she may help form committees, help arouse interest, call upon the lawmakers — but unfortunately both are blessed with an extremely short-duration level of political interest. Their enthusiasm is like a bright, momentary flash, which is quickly gone. Suburban politicians know this weakness and take full measure of every advantage. If the suburb is a very small one, with residents closely knit through ethnic and religious similarities, this criticism may not apply. Under such conditions local political enlightenment and interest is often upon a very high level. But this is infrequent. Very small, closely knit suburbs are the exception.

Some economists define the standard of living as that level of economic life below which an affianced pair will not marry until they can be sure of maintaining it. This concept does not apply to the upper echelons of suburban middle class for the simple rea-

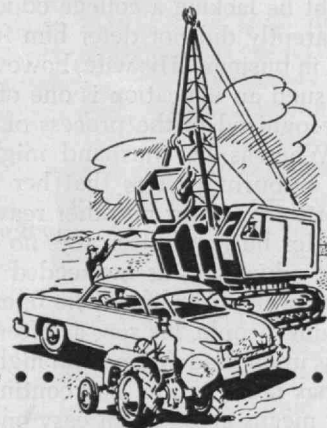
son that its youths do not have to struggle to attain or maintain it. Any time that a couple wishes to marry, the young man and woman expect that their home will be supplied to them. That problem is not their worry. Custom dictates that the bride's parents set them up completely, with home and furnishings. The groom's parents know it is their obligation to supply the wherewithal to live on, in the form of a good-paying position, or a very substantial cash gift to cushion early reverses or difficulties.

After observing the operation of the aforementioned parental obligations, the writer has come to the reluctant conclusion that the motivating force is prompted not through any deep-seated love for their children but rather by sheer egotism on the part of the middle-class parents. They would feel disgraced and ashamed if their friends knew that their children were obliged to work and struggle to attain positions in life. They also recognize that the more they do for their children, the greater becomes the dependence of the latter. Although it is self-satisfying for the parents to have their married children beholden to them, yet the corrosive action upon the characters of the young couples becomes evident in the many economic and emotional crises that arise with the years. They are ill-prepared for the vicissitudes of life, for their affluent, indulgent parents are always available to insinuate themselves as props and leaning posts.

The middle-class suburban family is not a spiritually healthy unit of our American society. Many of its members are well aware of the situations, although



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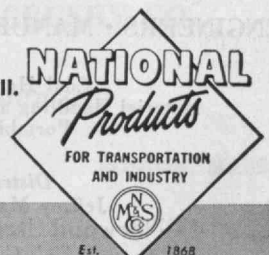
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rarely do any take the necessary steps to ameliorate the conditions. There are very sound reasons for the lack of participation by the men from this stratum of our life in the civic affairs of the various communities, local and otherwise. They are beset by fears and fatigue; afraid of retaliation by governmental agencies and individuals, or by labor organizations; and are just plain tired. Momentary enthusiasm may be kindled periodically over some local neighborhood problem, but sustained effort upon any level of interest in any category is almost unheard of. In addition, there is no leadership for the middle class. That is bad, for it is believed that if the middle class is sick so is our nation.

Within recent years a profound metamorphosis has taken place within the American body politic. Whether or not it is a healthy change, the future will divulge, although to this observer the emerging forms are not soundly fashioned. The ever-expanding compulsory social-security laws, in all their ramifications, coupled with low-cost housing, negatively affect the drive and desire for vertical mobility and social change. Whether or not one approves, the contrary democratic process of wealth and reward had offered the necessary impetus to great effort to create, in our country, the nation it had become. The freezing of social ranks has received a powerful stimulus since the Roosevelt regime, and a class consciousness — hitherto always condemned as deleterious to our national welfare — has emerged. As might be expected, all strata of society are affected, the middle class suffering more than the upper class, since the holdings

of the middle class are more precarious and are much slimmer.

Although, as Americans, we reject all the communistic tenets and decry the spurious glory of their highly vaunted propaganda and philosophy, yet we accept with apparent patience and seeming sympathetic silence, the selfsame ends through taxation and a warped messianic complex. Wealth is confiscated through taxation. Acquisition is discouraged and incentive for further gain, ethically achieved, is considerably diminished. On the one hand, wealth is taken away; and on the other, it is distributed to farmers to curtail production. All manner of benefits are offered to workers, rendering them thoroughly class conscious. The paternalistic state protects them with assured compensation through the various vicissitudes of industrial life: illness, unemployment, old age. Even homes are built for them. Everything is done through a magnificent grinding of those who "have" for the benefit of those who "have not." Incentive is becoming a marginal utility, flowering only in the fertile brains of a new aristocracy — the ever vociferous labor demagogues. The creation of a single proletarian whole is being attempted in America. Just as breathing is a "right," so have many new rights been born, and these have been superimposed from above upon the American public rather than soundly developed from below as a grass-roots growth.

Can it be that our middle class is being deliberately, officially ground to create the condition prophesied by Marx, as described in the third paragraph of this article: "When two classes remain society collapses"?



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TECHNOLOGICAL DEVELOPMENTS IN THE DAIRY INDUSTRY

(Continued from page 24)

per person per day), although we know that great numbers still do not receive an optimal dietary. We know of no food-processing industry to whom the significance of that last phrase applies with such force as to the dairy industry.

Ways and Means

Thus, after weighing the factors of the increasing pace of technological developments and the mounting pressure of population on food production, it would appear that the dairy industry will have to give most careful — indeed exhaustive — thought to ways and means of increasing its own yield. It can, fortunately, increase yields in more ways than one. First of all, it can increase basic unit milk yields per cow. The dairy industry has made major strides in this direction, judging from the progressive record of the average milk production per cow over the past few decades. Nevertheless, we assume even these basic unit yield possibilities have not been attained at the expense of still further substantial increases in the future.

The dairy industry can also increase yield on a qualitative basis through more efficient consumption of milk and its products. Any student of nutrition knows that if a nation's diet is composed of cereal-potato calories to the extent of 70 per cent or more, its people are unlikely to obtain an adequate diet. On the other hand, if the proportion of calories derived from animal products is 35 to 50 per cent, mineral and vitamin deficiencies are less likely to be widespread among the population. The proteins in skim milk are of the particular types that are essential for body growth and are involved in defense against disease. An extreme form of the elimination of food values occurs when milk is processed into butter and the skim milk and the buttermilk portions are discarded. This still happens far too often.

The quantity and quality of protein supplied by the diet are of vital importance to an individual's health at every age level. Although the public has heard a lot about the importance of vitamins, minerals, and other accessory food factors to good health, they have heard

(Continued on page 54)



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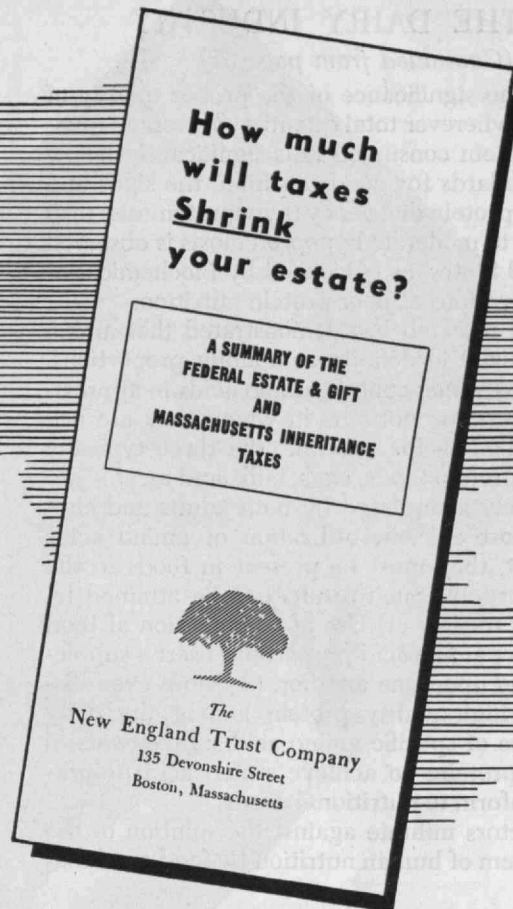
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TECHNOLOGICAL DEVELOPMENTS IN THE DAIRY INDUSTRY

(Continued from page 52)

little about the significance of the proper quality of protein. For, wherever total quantity or average quality of the protein consumed falls significantly below accepted standards for good nutrition, the signs and symptoms of protein deficiency (hypoproteinosis) may appear. Mild to moderate hypoproteinosis is observed in the United States, as evidenced by biochemical or clinical observations of poor protein nutrition.

Nutritional research has demonstrated that amino acids are utilized in definite combining proportions. Those proteins which contain amino acids in approximately the same proportions in which they are utilized in the body—for example, the three typically high quality protein foods, eggs, milk, and meat—are most effectively assimilated by both adults and children. For most efficient utilization of amino acids from the diet, they must be present in foods in the proper proportions. Such results can be attained by the following means: (1) Use of combination of food proteins whose amino acid proportions exert a supplementary effect upon one another. (2) More even distribution of high-quality protein among the daily meals. (3) Use of specific amino acid supplements to low quality proteins to achieve amino acid proportions that conform to nutritional needs.

Several factors militate against the solution of the protein problem of human nutrition by food combina-

tions alone. In the United States, a rapid population increase may, in time, place a strain on protein resources by reducing the potential per capita supply of high-quality proteins that can be applied for improvement of an over-all amino acid balance. While we can improve nutritional circumstances by amino acid fortifications, we are not yet assured that consumers will accept foods so fortified. It seems technologically possible, however, that by proper combination of available proteins and by small additions of supplementary amino acids to staple foods, we might be enabled to effect the equivalent of a 50 to 100 per cent increase in dietary protein without increasing the amount of food grown.

One important characteristic of milk that the dairy industry should not overlook is the fact that the amino acids contained in skim milk are in such proportions and amounts as can contribute to an improvement of amino acid balance in an individual's protein nutrition. In addition, those same amino acids can supplement other foods to secure more efficient utilization of the total protein intake. For example, if consumed without milk some breakfast cereals would be of a low order nutritionally. Yet, when they are eaten with milk, whole or skimmed, the total protein intake is made available. The total nutritional value is greater than if cereal and milk were digested separately. Obviously, the nutritional value of skim milk needs to be more fully exploited. Moreover skim milk needs to be produced more economically to meet the threat of

(Concluded on page 56)



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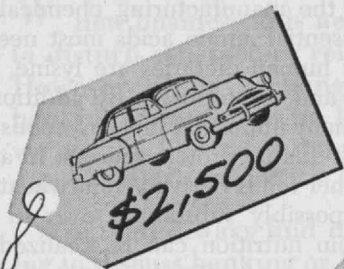
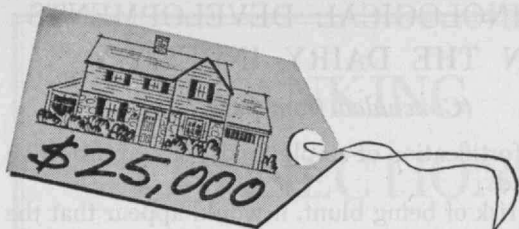
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TECHNOLOGICAL DEVELOPMENTS IN THE DAIRY INDUSTRY

(Concluded from page 54)

possible fortification of staple foods with appropriate amino acids.

At the risk of being blunt, it would appear that the dairy industry may find it has a possible and formidable competitor in the manufacturing chemical industry. The four essential amino acids most needed for improvement of human dietaries are lysine, methionine, threonine, and tryptophane. By addition of these amino acids, many important low-cost foods can be converted to high-quality protein sources. In areas where bread and other foods derived from wheat are important staples, possibly substantial over-all improvement in protein nutrition can be realized by fortification with lysine alone. Combinations of these four amino acids can also be effectively utilized to enhance the protein nutritional quality of other dietaries, such as those based on rice, potatoes, and legumes, for example. In many instances it is not at all unrealistic to predict that the effective supply of dietary protein can be increased markedly through mere amino acid supplementation, provided the basic economic problems of combining or adding these four amino acids can be solved.

Dairy Industry's Opportunity

If it will but realize the nutritional value of milk's protein constituents and capitalize on them, the dairy industry has a great opportunity to make mighty contributions in solving the coming population pressure problem as well as that of existing dairy surpluses. The industry should not overlook milk's great possibilities and opportunities of enhancing the overall acceptabilities and nutritional values of a wide variety of nondairy food products. In short, the technological future of the dairy industry appears to be tied up in successfully solving (1) the problem of the increased production of cheaper milk, and (2) the all-out exploitation of the high-protein quality of its skim milk supplies. Nutritionally and economically, the dairy industry appears to have lost the battle of edible fats. Its future fate as a technological leader among the food industries—and, in fact, its own industrial pre-eminence and survival—may well reside in the outcome of the battle of high-quality proteins.

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PROMISE OF TOMORROW

(Concluded from page 26)

than we have hitherto mastered. As we scan the future, we anticipate that we shall face more, rather than less, of these abstruse issues.

Where do we turn for strength? I believe that many of us will take occasion, if we have not already done so, to renew the habits of our youth and once more to seek surcease and support from the church and the concepts and the faith for which it stands. Time and again we have found our powers renewed and our insight strengthened through spiritual communion.

A great industrialist has said that it is more difficult to maintain perfection than to attain it. Recently one of our Alumni remarked to me: "It's admirable to make good; it's noble to stay good." It is heartening to know that there are spiritual reserves available to every one of us, upon which we may freely draw.

And so I come to the promise of the future. Before you lie new and fascinating opportunities. In the sunny hours of life's afternoon you may enjoy to the full the satisfactions which spring from greater accomplishments through others; from greater creativeness with others; from greater contributions for others; from greater loyalties to others; and from greater companionship with Another.

Yet the promise of the future is more than this. As you learn to apply the arts of delegation, of group endeavor, of contribution for the sheer delight of the giving, of larger and deeper loyalties, of closer communion with the Spirit, you will inevitably increase your stature, widen your outlook, enhance your worth to the world. You will continue to grow—in trust, companionship, generosity, loyalty, and faith.

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Alumni AND Officers IN THE News

Alumni Attainments

WILLIAM FURER '06, THOMAS H. ATHERTON '09, ALBERT MAYER '19, BERTRAM A. WEBER '22, and ROBERT C. DEAN '26 have been named fellows of the American Institute of Architects.

DAVID G. C. LUCK '27 received the Stuart Ballantine Medal of The Franklin Institute of the State of Pennsylvania on October 21 "For his invention of the Omnidirectional Radio Range, an essential element in present day air traffic control."

S. DONALD STOOKEY '40 and Robert H. Dalton were awarded John Price Wetherill Medals by The Franklin Institute of the State of Pennsylvania for their discovery of a revolutionary photosensitive glass process. The Corning men are being honored "In consideration of their work in leading to and developing a practical and commercially acceptable method for producing photographs in glass and opalescent designs in glass by photosensitive processes."

GEORGE R. HARRISON, Dean of Science, received an Elliott Cresson Medal on October 21 at the annual Medal Day ceremonies of The Franklin Institute of the State of Pennsylvania. The award was made for Dr. Harrison's work in spectroscopy.

Names in the News

HUGO H. HANSON '12 was named chairman of the board of W. C. Hamilton and Sons, in Miquon, Pa.

HARRY L. BOWMAN '14 has been appointed Dean of the Faculty and Dean of Engineering at Drexel Institute of Technology in Philadelphia.

LEWIS W. DOUGLAS '17, former Ambassador to Britain, was named chairman of a mid-century conference on the evaluation and long-range use of the country's natural resources, to be held in the late fall. One of the vice-chairmen of the conference is Karl T. Compton.

WILLIAM C. FOSTER '18 has been elected president of the Manufacturing Chemists' Association. The announcement was made in June.

JOHN E. BURCHARD '23 was elected vice-president of humanities by the American Academy of Arts and Sciences at the Academy's annual meeting in Boston.

GEORGE P. SWIFT '24 was named president of the American Electroplaters' Society in June.

JOHN R. KIMBERLY '26 has recently been elected president of the Kimberly-Clark Corporation.

Off the Presses

MARION R. HART '13 is the author of a new book entitled *I Fly As I Please* (New York: The Vanguard Press, 1953, \$3.00).

CRAWFORD H. GREENEWALT '22 is the author of an article entitled "Speaking up for Business," which was featured in *Dun's Review and Modern Industry*, August, 1953.

RALPH M. EVANS '28, W. T. Hanson, Jr., and W. Lyle Brewer have written a book entitled *Principles of Color Photography* (New York: John Wiley and Sons, Inc., 1953, \$11.00).

KARL W. DEUTSCH, Professor of History and Political Science, has written a book entitled *Nationalism and Social Communication* which in manuscript form was awarded Harvard's 1951 Sumner Prize (New York: John Wiley and Sons, 1953, \$5.00).

Obituary

ARTHUR B. CRAM '80, May 31.

FRED E. BEDLOW '85, May 15.*

BIRNEY C. BATCHELLER '86, November 27, 1950.*

HARRY E. CLIFFORD '86, July 7, 1952.*

HORACE P. COFFIN '86, June 26.*

ORRIN S. DOOLITTLE '86, October 29, 1951.*

JAMES C. DUFF '86, October 7, 1951.*

HENRY P. MERRIAM '86, February 28, 1952.*

VERNON F. WORCESTER '86, February 13, 1951.*

IVAR L. SJOSTROM '88, June 13.

SOPHIA G. HAYDEN BENNETT '90, February 3.*

BERTRAM A. LENFEST '90, August 5.*

KING W. MANSFIELD '91, July 22.*

ROBERT C. SPENCER '91, September 9.

CHARLES V. ALLEN '93, May 15.*

LORING E. PIERCE '93, May 26.*

HENRY B. DATES '94, May 17.*

EDWARD F. STRONG '97, July 29.*

EDWIN W. GEHRING '98, August 8*

FREDERICK H. JONES '98, March 24.*

FRANK A. SPAULDING '98, June 17.*

JUAN GAILLARD '99, March 16, 1951.*

ARTHUR H. HERSHEY '99, April 27.*

GEORGE O. JACKSON '99, March 14.*

EARLE B. PHELPS '99, May 29.*

CHARLES A. SMITH '99, August 6.*

FREDERIC W. SOUTHWORTH '00, September 1.*

THEODORE C. TUCK '00, May 21.*

FREDERICK H. BASS '01, May 13.*

FRANK CUSHMAN '01, April 27.*

ALBERT W. HIGGINS '01, date unknown.*

HARRY A. HODGDON '01, June 12.*

MARY A. HOLT '01, May 15.*

RAY MURRAY '01, June 30.*

ALEXANDER S. ACKERMAN '03, June 23.*

HENRY W. BUHLER '03, June 19.*

MYRON H. CLARK '03, August 30.*

FREDERICK S. ANDERSON '04, June 27.*

WILLIAM B. FERGUSON '04, February 26.*

CYRUS P. HOWES '04, June 5.*

ARTHUR J. AMBERG '05, June 20.*

REGINALD FITZ '05, May 28.*

THEODORE GREEN '05, August 2.

RICHARD O. MARSH '05, September 5.*

MAURICE E. WEAVER '05, May 19.*

ALFRED R. HECKMAN '06, February 14.*

HAROLD C. SMITH '06, July 27.*

F. AUSTIN TARR '06, April 6.*

CLINTON C. BARKER '07, June 5.*

HOWARD R. CHASE '07, August 8.*

FRED W. MORRILL '07, May 26.*

BYRON P. LUCE '07, May 1.*

TRACY SMITH '07, April 30.*

GEORGE W. EVERETT '08, Fall, 1952.*

ELEAZAR MYERS '08, July 22.*

PAUL B. LORD '09, August 9.*

CARL C. DUDLEY '10, date unknown.*

KARL D. FERNSTROM '10, May 6.*

J. KEARSLEY MITCHELL HARRISON '10, date unknown.*

DAVIS H. TUCK '11, July 5.*

FRANK H. CURTIS '12, March 6.*

AKSEL M. PEDERSEN '12, June 12.*

KENYON PRUYN '12, March 2.*

ELLIOTT W. TARR '12, March 27.*

ALICE M. JOHNSON '14, August 24.

MRS. HOWARD W. WELLWOOD '15, June 10.

WALTER S. AIKEN '16, date unknown.*

PAUL H. BUXTON '16, May 23.*

FRANK E. DRAKE, JR., '16, October 18, 1952.

JOSEPH W. GRIFFIN '16, date unknown.*

W. THURBER FALES '17, May 21.*

J. STUART CRANDALL '17, July 20.*

GERTRUDE T. SPITZ '17, December 8, 1952.

DONALD H. MONTGOMERY '18, August 13.

FREDERICK B. SMITH '18, July 5.

SCOTT KEITH '19, July 4.*

ALLEN H. KNOWLES '19, May 28.*

EUGENE R. McLAUGHLIN '19, May.*

SPENCER W. BUTLER '21, May 26.*

SIDNEY FEATHERMAN '21, July 1.*

STUART NIXON '21, June 9.*

C. KING CROFTON '22, April.*

HAROLD B. GOLDING '23, July.*

THOMAS O. RICHARDS '25, May 17.*

WILLIAM J. T. OTTERSBERG '27, August 7.*

EUGENE L. SAHOD '30, July 14.

ROBERT B. J. BRUNN '33, July 30.

JOHN IGLAUER '38, date unknown.*

IRVING SHAKNOV '43, May 15, 1952.*

GORDON L. BAKER 10-44, May 2.

HASBROUCK FLETCHER '51, August 19.*

WALTER HARMON '52, July 28.*

* Mentioned in Class Notes.

News FROM THE Clubs AND Classes

CLUB NOTES

M.I.T. Club of Fall River

A perfect day for a sail down Narragansett Bay followed by a buffet supper at the home of our Executive Vice-president, Bob Ashworth'25, made the Club outing on June 24 a most delightful occasion.

Professor Paul Chalmers told us in a most interesting way about publicizing M.I.T. and the selection and admission of students, illustrating his talk with examples of unusual and amusing situations that arise. In his capacity of advisor to all foreign students Professor Chalmers is in a position to be intimately familiar with the world-wide recognition of M.I.T. as a leader in its educational field. New campus facilities, many extracurricular activities, and strong professional courses combined with the humanities attract many applicants for admission. Careful screening of these applicants is made so that the mortality after admission is held to a minimum.

A good representation of club members from Fall River and Newport were on hand for the outing including, besides our host, Robert C. Ashworth, Jr.'25, our guests, Professor Paul Chalmers and Donald P. Severance'38, and our President, Rudolph F. Haffenreffer'95, the following club members: Alan H. Andrews, Robert F. Burnett'10, John A. Carvalho'28, Richard M. Dunlap'40, Charles Epstein'40, Alfred R. C. Katzenmeier'02, Richard H. Gee'20, Lester Glickman'32, Frank W. Greenlaw'90, Louis H. Hobbs'22, Oliver S. Jennings'08, David Kaufman'23, Joseph L. Kennedy'26, Louis Michelson'40, Isaac Schwartz'32, Caesar A. Spero, 2-44, Matthew D. Sullivan'31, Joseph Westell, Jr.'30, Saul Wolf'50 and George B. Wood, Jr.'38. — ROBERT F. BURNETT'40, Secretary, 242 Lincoln Avenue, Fall River, Mass.

M.I.T. Club of Hawaii

The Club had a very pleasant and interesting luncheon meeting, quite a "technological toot," on Saturday, September 5, at the Oahu Country Club. Our honored guest was Professor John Slater of the Physics Department, who was on his way to an international convention of physicists in Tokyo and Kyoto, Japan.

Professor Slater gave us a very interesting talk about the developments in physics and then did a very able job of answering questions from many of us who have become somewhat bewildered by the rapid expansion and new concepts in this field of science. In fact nearly all of the 17 present took part, from H. R. Robbins'05 to the newest graduates. Afterwards two of us took Professor Slater

"around the island" in time for dinner at the officers' mess in Pearl Harbor Naval Shipyard.

We are all indebted not only to Professor Slater, but also to Emmons Whitcomb'11 and Mr. Severance'38 for letting us know in advance that he would be in Honolulu on September 5. — WALTER T. SPALDING'10, President, W. T. Spalding Company, 77 Merchant Street, Honolulu, Hawaii. SAMUEL L. GRAHAM'24, Secretary, 623-5 Pumehana Street, Honolulu, Hawaii.

Indiana Association of the M.I.T.

Another Ladies' Night, on June 11, completed our 1952-1953 season. Twenty-one attended at the Athenaeum Turners Club where we had an excellent dinner. Our President, Frank Travers'23, is having a European jaunt, so our Vice-president, Edgar Godley'26, handled the meeting. He passed the ball to Jim Sligar'41 who introduced the speaker, Jerry Saelens, District Representative, Linde Air Products, who presented a color sound movie entitled *Synthetic Gems*. It was an excellent movie and at its conclusion Mr. Saelens showed samples of synthetic gems and explained their uses in the jewelry and industrial fields.

Those in attendance were: Mr. and Mrs. John H. Babbitt'17, Mr. and Mrs. Thomas C. Dorste'47, Mr. and Mrs. Edgar B. Godley'26, Mr. and Mrs. Richard J. Hall'48, Professor and Mrs. Samuel H. Hopper'33, Harold M. Oshry'35, Mr. and Mrs. Spiros G. Pantazi'47, Mr. and Mrs. James S. Sligar'41 and two guests, Mr. and Mrs. J. R. Ramsey'17 and Mrs. Herbert Kent as a guest. Dr. Kent'49 was called recently to the Air Force. He and Mrs. Kent have attended our meetings faithfully and we shall miss them. — J. RAYMOND RAMSEY'17, Secretary-Treasurer, 511 Spruce Street, Plainfield, Ind.

M.I.T. Association of Japan

The general meeting of the Association was held on May 25, 1953, at the Kishimoto Building in Tokyo. The purpose of this general meeting was, first, to complete our campaign to raise \$100 for the M.I.T. Alumni Fund; second, to announce that Yoshinori Chatani'22 and Ryohei Arisaka'17 are going to the United States for business, and third, to introduce four gentlemen who have been selected to attend the Foreign Students Summer Project and who are expected to leave Japan very soon.

The attendants at the meeting were as follows: Ryohei Arisaka'17, Yoshinori Chatani'22, Tatsuo Furuichi'14, Yutaka Hara'33, Taro Isobe'35, Kohei Kagami'22, Masaru Kametani'25, Tamio Kasahara'24, Yoshio Kubota'23, John K. Minami'31, Takanaga Mitsui'18, Masaru Miyauchi'29, Kiichi Murakami'29, Kichizo Sakakibara'33, Utaka Tanaka'10, Masayuki Tatsuno'18, Akira Nomoto'51, F.S.S.P., Kikuo

Kotoda'52, F.S.S.P., Hiroshi Ichiura'53, F.S.S.P., Saburo Muroga'53, F.S.S.P., Chiyoie Yamanaka'53, F.S.S.P.

The campaign of raising the Alumni Fund ended very successfully at the meeting breaking the goal line. Already prepared, \$100 was handed over by Kametani to Chatani who will present it at the Reunion at M.I.T.

Ryohei Arisaka'17 is also leaving Hameda in early June, and he expected to visit M.I.T. sometime in July. Hiroshi Ichiura, Saburo Muroga and Chiyoie Yamanaka, who attended this meeting were very happy to participate in the Foreign Students Summer Project of 1953 at M.I.T. They received much valuable advice and information on Tech life at the Institute and their daily thoughts should already be on the city of Boston and the campus of M.I.T.

At the end of the meeting, John K. Minami announced that Frank M. Ikuno'32, VI, is leaving Japan in July and we promised a farewell meeting for him at the end of June. We also asked Chatani to deliver two wood prints presented by the Association for Mr. Donald Severance's office and Professor Hazen's office. In case these wood prints are liked by others, additional copies can be sent.

The July meeting was held on the afternoon of Saturday, July 11, 1953, at Okuma Kaikan, Waseda University. The main event of this meeting was the plan to say good-bye to Major Frank M. Ikuno'32, VI, who is soon returning to the States. Frank has been one of the regular attendants to "good fellowship assembly" of the meetings of the Club. We have enjoyed to the fullest his companionship and help which he has rendered us. A beautiful silver cigarette case with his name engraved on it was prepared to present to him as a token of our good friendship by the Association. However, Mrs. Ikuno's sudden illness was reported and Frank was unable to attend the meeting at the last minute. The present was delivered to Frank by Professor John K. Minami'31, Secretary. We all wished the earliest recovery of Mrs. Ikuno.

Announcement made in the *Nippon Times* of Sunday, July 5, has been very effective and four gentlemen responded and attended the meeting. They were Willie Buell Evans'44, XIV, H. Royce Greatwood'25, IX-B, J. A. Rivera and Z. T. Wong'18, II. Mr. Rivera at Everett Steamship Corporation joined the meeting because his son is studying at M.I.T. Mr. Greatwood, representing the Union Oil Company of California, is advising the Maruzen Oil Company. Mr. Wong is here as a trader and Mr. Evans, F.E.A.F., is also leaving Japan very soon. Most of these gentlemen have been in Japan for some years and yet we never had a chance to meet them before to our regret.

Other attendants were as follows: Yutaka Hara'33, Tatsuo Furuichi'14, Shikao Ikehara'28, Masaru Kametani'25, Kikuo Kotoda'52, Takanao Kuki'29, John K. Mi-

nam'i'31, Kiichi Murakami'29, Tachu Naito'18, Mambu Sasaki'28, Yutaka Tanaka'10, Taizo Hayashi.

Two letters from Mr. Severance'38 were read by Kametani. The one is acknowledging the receipt of our contribution to the Alumni Fund and a wood print for the Alumni Office at the Institute. The other gave us very happy news that Professor John C. Slater will be in Japan from September 8 through October 6 which will give us a chance to hold our meeting in his honor. Therefore, our next meeting will be on around September 9, 1953, with Professor Slater, provided he will be available at that time. — MASARU KAMETANI'25, *President*, 71 Shimizucho, Suginamiku, Tokyo, Japan.

M.I.T. Club of The Lehigh Valley

The annual meeting of the Club was, as has been the practice in the past, a social affair attended by both Alumni and their wives. This year's meeting was held at Shawnee-on-Delaware. Two foursomes managed to evade the time clock and take advantage of the excellent golf facilities at Shawnee prior to the meeting. Less fortunate members and their wives arrived for cocktails and the buffet dinner at a later hour. Following the dinner George J. Meyers, Jr., '29, of Reading gave an excellent talk describing his recent visit to France as a member of an industry advisory group from this country who visited various French manufacturers in Le Havre, Nantes, Marseilles, and other manufacturing centers. Of particular interest was George's discussion of the impact of the Moral Rearmament Movement in Europe.

Officers were elected for the 1953-1954 term as follows: President — Henry Moggio'28, Vice-president — Charles W. Gotherman'13, Treasurer — Malcom Blake'25, Secretary — John D. Briggs'42; Members-at-Large: Stephen L. Muther'34, and Donald J. Blickwede'48. In addition to the newly-elected officers and their wives, the following attended: Mr. and Mrs. Bob Loss'22, Mr. and Mrs. Arthur Gould'38, Mr. and Mrs. John Kressman (Hilda Schneider'42), Mr. and Mrs. John Brosnahan'35, Mr. and Mrs. Floyd Fuller'06, Mr. and Mrs. George Meyers, Jr., '29, Mr. and Mrs. Wiley Post, Mr. O. P. Young'20, Mr. and Mrs. Hugh Brenan'25, Mr. and Mrs. Ted Lyons'27, Mr. and Mrs. E. J. Flynn'19, Professor and Mrs. Allison Butts'13, Mr. and Mrs. Mike Herasimchuk'39, Mr. and Mrs. Jack Smyser'35, Mr. and Mrs. Paul Cogan'13, Mr. and Mrs. Irvin Weiss'39, Mr. and Mrs. Schaner.

Mike Herasimchuk'39, who was instrumental in the establishment of our Club, will be absent from the executive committee for the first time in the coming term. Mike has done a grand job in getting the Club going in the Lehigh Valley, and we feel that we are well established as an active alumni group. A vote of thanks was due Bob Loss'22 who finished his term as President and Art Gould'38, who finished a three-year term as Treasurer.

Our next meeting will be held in the early fall and will take the form of a dinner and either a visit to one of the local industries or a presentation by repre-

sentatives of a local industry. It is hoped that any Alumni who may not be receiving notices will contact the Secretary and attend our meetings this fall. — JOHN D. BRIGGS'42, *Secretary*, 131 Wall Street, Bethlehem, Pa.

M.I.T. Club of New York

Judging from the amount of preliminary planning that Pete Grant'35 has done, this year's activities should be the most interesting and extensive the Club has ever undertaken. Pete has committees to study everything that a good club needs to be better. El Koontz'36 is chairman of a committee to study the aims and objectives of the Club. Socks Kinsey's'24 committee is investigating the possibility of a permanent secretary; Dave Jealous'44 has a committee which will attempt to find out what the club members want in new activities; Ralph Wilts'41 and committee will continue the *Membership Directory* and publicity; Don Taylor'35 is chairman of a committee to run the fall program for the Club; Lou Bruneau'38, has a committee well along the way to another successful Silver Stein Award Dinner, and Bernie Nelson's'35 Committee is looking into area meetings.

At our Annual Meeting in May, all of last year's officers and directors were re-elected, and Don Taylor came back to us as a Vice-president. The main thing these men need to make it a good year is help from the membership. Any ideas or suggestions would be greatly appreciated by these chairmen.

Ken Nelson'44, was chairman of our Golf Party in June. He not only did a grand job in running the affair, but was able to win the Club Championship, and to rub it in the Class of '44 won the Class Championship. This would ordinarily be suspicious, but we had a man from '22 check and verify the results.

Our Fall Smoker will be held in October. The date has not been set, but we will have it publicized in the near future. We are still at our old stand at the Architectural League, 115 East 40th Street, and invite all visitors, friends and guests to join us at lunch or evening. — RALPH WILTS'41, *Secretary*, American Blower Corporation, 50 West 40th Street, New York 18, N.Y.

M.I.T. Club of Northern New Jersey

The Hotel Suburban in Summit was the setting for the Club's June 2 meeting attended by 52 members and guests. It was a doubleheader meeting since the annual business meeting preceded the formal program at which Professor Eli Shapiro, Professor of Finance at M.I.T.'s School of Industrial Management, addressed the Club on "What is Ahead for Business."

President Grover C. Paulsen, Jr., '40, presided at both meetings and first called upon Joseph Wenick'21 for the Treasurer's report. Joe set a new precedent for treasurers' reports leaving out all the odd cents and confining his report to the most dramatic figure, the fact that income exceeded outgo for the year by \$40.00. He also reported a total dues paying membership of 174. L. L. Tremaine'23 re-

ported for the Scholarship Committee and stated that 106 prospective students had been interviewed and that a selection had been made for the regional scholarship. For the Placement Committee, H. D. MacDonald'22 reported that there had been considerable activity both of men seeking new placement and of companies seeking new men. Sumner Hayward'21, Cochairman of the Educational Council, gave encouraging information that the council now had activated 27 counselors and 23 honorary secretaries and that by fall it hoped to be completely organized. Schools have already been contacted and in some areas groups of prospective students have been entertained and shown the film *Men of Science*.

An amendment to the bylaws was proposed and passed incorporating the Educational Council as a regular activity of the Club and a regular standing committee.

The election of new officers followed. L. L. Tremaine, Chairman of the Nominating Committee, reported for that Committee and presented nominations for all offices to be filled. The new officers elected are: President, Glenn D. Jackson, Jr., '27; Vice-president, Jack F. Andrews'33; Secretary, Russell P. Westerhoff'27; Treasurer, Joseph Wenick'21. Governors elected for three years are: D. H. Spitzli'27, S. G. Stearns'39, C. V. Chamberlin'23.

With the conclusion of the annual meeting the formal program for the evening got under way, and we had a most detailed and comprehensive rundown of the present business outlook from Professor Shapiro. He classified the outlook for the balance of 1953 as good. The second and third quarters should proceed at near capacity with some downturn in the fourth quarter which downturn would continue in the first half of '54. However, this downturn would not be of a cumulative variety and there would be compensating influences to make '54 have good prospects. He pointed out that the major outlays of the defense security program should have been passed by the end of 1953 resulting in a likely decline of the security expenditures of the national government, which are currently in the ratio of \$51 billion against \$6 billion for non-security expenditures. A drop in security outlays could therefore be keenly felt by the economy but in compensating for any drop there are accumulated state and federal expenditures due for public works and institutions. State expenditures currently running at the rate of \$25 billion are expected to rise to \$27 billion in 1954.

Civilian expenditures do not appear to be headed for any sharp drops. The farm program is certainly not going to be cut with 1954 elections ahead. Industry outlay for new equipment will total \$27 billion in '53 and is likely to slide downward in '54. Housing starts, currently at the rate of 1,200,000, are ahead of 1952 but because the rate of family formation is slowing up may decline in '54. On the other hand commercial construction is booming and may take up the slack residential housing may experience.

Business inventories which rose in 1952 at the rate of \$8 billion actually are not

accumulating at the present time and appear to be safe as long as sales continue at the present level; there is some evidence that sales may be increasing.

Personal income, at \$245 billion in '52, is expected to rise in '53. This is the major influence in consumption of goods. Savings which started to climb in '51 are still rising, a fact which indicates the public's ability to purchase additional disposable goods. Despite the high rate of savings there has been a sharp rise in consumer credit with personal indebtedness at the very high figure of \$25 billion. Automobile purchases have pushed this figure up to this level; the Federal Reserve Board's annual survey of consumer plans on expenditures in '53 shows that outlays should rise for this type of commodity. The demand for services is also extremely high.

A larger labor force which will be available in 1954 is a fact to be reckoned with in the event of any downturn of activity. On the positive side of the picture there is the fact that because of the high costs and heavy investments in new equipment, depreciation is increasing which brings in more tax credit. The possible decline in residential construction may be offset by the decentralization of communities which is creating a demand for more housing. Housing replacement is at a faster rate now and there is no evidence of a housing surplus. If a recession were to develop to a degree where the government felt it necessary to stimulate the economy, Professor Shapiro feels that since the present administration has the confidence of the business community, the latter would probably continue to make equipment purchases so that there would not be a sharp pulling in of horns in fear of future government action. The present income tax structure with high surtax rates would protect disposable income in the event of recession. In a broad general view of the outlook, Professor Shapiro feels that it is possible that gross national product expected to reach a possible peak of \$365 billion in 1953 may drop 10 per cent.

The social hour with refreshments which followed the formal meeting was one of the pleasantest we had and most of the people in attendance lingered long around their tables with beer, cokes and sandwiches. The clock was turning toward midnight before the last man left. — RUSSELL P. WESTERHOFF '27, *Secretary*, 823 East 23rd Street, Paterson, N.J. JACK F. ANDREWS '33, *Assistant Secretary*, 209 Tuttle Parkway, Westfield, N.J.

M.I.T. Club of Puerto Rico

The Club held its annual meeting on the night of August 7, 1953, and, in accordance with its Constitution, a new Board of Governors was elected. The new Board is composed of: Antonio Romero '12, President; Adalberto Roig '24, Vice-President; Luis H. Mendoza '46, Treasurer; Angel Silva, 2d, '31, Secretary; Telesforo Carrero '47, Orlando C. de Aragon '39.

So far the Club has been meeting annually for the discussion of business matters. The salient note of this meeting was

the determination to assemble oftener in gatherings of a social nature whereby each member may get better acquainted with the others, and also the offering to transient Alumni and to those who, in the armed forces, may be temporarily detached in Puerto Rico, opportunities to meet as many members of the Club as possible.

The Club has at present 53 registered members, and it is hoped that the new activities planned will produce large turnouts. All M.I.T. Alumni Association members coming to Puerto Rico are invited to call the President or the Secretary, who will endeavor to orient them properly and make their stay in this country pleasant.

The President, Judge Romero '12, may be located at the Tax Court, Phone 2-1528. The Secretary, Mr. Silva, may be located at the Department of Public Works, Phone 2-0040. — ANGEL SILVA, 2d, *Secretary*, Apartado 6234, Santurce, Puerto Rico.

M.I.T. Club of Southern California

The Club had an unusually pleasant summer meeting on Thursday, August 27, at the University Club in Los Angeles. The occasion was the visit of F. Leroy Foster '25, Associate Director, Division of Industrial Cooperation at M.I.T., to Los Angeles. The meeting was small as it was the height of the vacation season. The 22 members who attended had a grand time and enjoyed very much Dr. Foster's very interesting talk on "Sponsored Research at M.I.T.," during which he told us of the many interesting projects handled by the Institute and the manner in which they are administered.

We were particularly glad to welcome two members of the Class of '53: Donald McCool and Harold Tseklenis and their wives. We were also glad to have G. Huntington Clapp '03 of the 50-year Class who sat at the head table with the officers and governors who were present: W. H. MacCallum '24, President, R. E. Hiller '31, Vice-president, P. A. Herrick '31, Secretary, H. H. Strauss '38, Governor.

George B. Blonsky '25, a classmate and friend of Dr. Foster's, was in town from Arizona and provided us with an international flavor, for when we learned that he had been born in Manchuria and spoke eight languages, we asked him to say a few words in Pekinese. Harold Tseklenis '53 followed with a few words in his native Greek. We are all very happy that Mr. and Mrs. Harry T. Rollins '04 drove up from La Jolla for the dinner and hope that we will see many more of the Alumni from the La Jolla and San Diego area at our meetings this year.

Those who attended were: G. Huntington Clapp '03, Harry T. Rollins '04, Harold S. Johnson '12, Philip A. Herrick '24, William H. MacCallum '24, George B. Blonsky '25, F. Leroy Foster '25, L. G. Miller '27, Robert E. Hiller '31, Ralph Lebow '38, Harold Strauss '38, Alvin A. Markus '47, Mel Posin '48, Roger L. Sisson '48, J. R. Willner '50, Patrick E. Grif-

fin '50, Bob Towbes '52, Donald McCool '53, and Harold Tseklenis '53. — WILLIAM H. MACCALLUM '24, *President*, 880 Winthrop Road, San Marino 9, Calif. HIRAM E. BEEBE '10, *Review Correspondent*, 1847 North Wilcox Avenue, Hollywood 28, Calif.

CLASS NOTES

• 1885 •

Once more our Class has been visited by the "Old Man with the Scythe," and this time has taken Fred Everett Bedlow who died on May 15, 1953, at his home in Melrose, Mass., after a short illness.

He was born in Lowell, Mass. For 40 years he served the Southwestern Bell Telephone Company in Dallas, Texas, and later worked for 20 years with H. P. Hood and Sons, Boston, Mass.

He was a member of Mt. Vernon Lodge of Masons, and Royal Arch Chapter. He was a loyal member of our Class and always attended our meetings. He was a genial companion. Since 1949 he has represented the Class at the Council. — ARTHUR K. HUNT, *Secretary*, Longwood Towers, Brookline 46, Mass.

• 1886 •

My attempt at humor (?) in the June issue was apparently not considered worthy of mention by a single member of '86. Perhaps it is an indication that another secretary is needed, who can pull class information from the air without waiting for it to come by mail or telephone! Perhaps the idea of another secretary is not such a bad one either; only where will you find him? By another June 7 the present Secretary will, if he lives, have reached the 90-year mark where most of the members are already paddling along. Who, then, is to be the sacrifice when A.T.C. becomes incapacitated?

At the last alumni gathering in June the Secretary, who was spending the night at the Statler, spent so much time adjusting his collar and necktie before the banquet that practically everyone was seated when he arrived. The '86 men were supposed to be with the other oldsters up near the platform, but a hunt failed to locate any of such an early vintage and there being a vacancy at the '98 table, he was asked to join them. Result: he did not see any '86 or other '80-plus men. Could it be that he was the only '86-or-earlier alumnus present? If any '85 representative was at the banquet, will he please accept my apologies as I do not wish to achieve an undeserved notoriety.

I was also at the luncheon at M.I.T. and condescended to accept the President's invitation to share his hospitality later in the day; here again I saw no earlier Class represented. At the luncheon, however, Godfrey Cabot '81 (lucky chap) was at the head table and sat with the mighty. I wonder if I shall ever be considered worthy of such distinction.

But no! I am not a graduate, as I have to explain frequently, and I do not think my efforts to bring a lighter atmosphere into the notes will ever deserve such fame. Also, I apparently scorned continuing as an electrical engineer and became a certified public accountant in my brother's firm; he was graduated from M.I.T. in '83 as a mechanical engineer but became a C.P.A. of considerable distinction. I have never understood why the C.P.A. organization made me an honorary member as I never held any official position other than that of Treasurer and that never made me rich! Say, could that be the reason, do you suppose?

To get back to matters of interest to '86 Alumni, I have been notified through the Alumni Office of the death of Horace P. Coffin who succumbed to the inevitable on June 26 last. The Secretary sent a clipping from the Philadelphia, Pa., *Bulletin* which states that Coffin died at his home, 454 East Locust Avenue, Germantown, Pa., at the age of 90. The article goes on to say that "Mr. Coffin was one of the last survivors of the Class of 1886 at the Massachusetts Institute of Technology."

This statement makes me think it advisable to print the list of living members of the Class with addresses according to my records (not including the S.M.A. boys) as well as those who have died since I took over in 1947. Those (other than the Secretary) still living are: William H. Buswell, 21 Central Street, Methuen, Mass.; William K. Campbell, 185 Fayette Street, Wollaston, Mass.; William C. Chase, 8 Marlborough Street, Boston, Mass.; Roland G. Gamwell, 1001 16th Street, Bellingham, Wash.; Walter R. Ingalls, Ingaldsby, Georgetown, Mass.; William F. Jordan, White Plains, N.Y.; Walter H. Low, Saratoga Inn, Saratoga, Calif.; Frederick Mackintosh, 1025 Gillespie Street, Schenectady, N.Y.; Edward L. Pierce, 15 Hibben Road, Princeton, N.J.; and Howard B. S. Prescott, 45 Pelham Street, Newton Center, Mass. I do not think that Coffin can rightfully be classed as "one of the last survivors" when 11 and possibly more are still above board. If I have omitted any, please correct me.

Those who have died since October 1947 are: Batcheller, November 27, 1950; Clifford, July 7, 1952; Coffin, June 26, 1953; Doolittle, October 29, 1951; Duff, October 7, 1951; Merriam, H. P., February 28, 1952; and Worcester, February 13, 1951. If anyone reading these notes has later information concerning any '86 M.I.T. member, will he please notify the Secretary. — ARTHUR T. CHASE, *Secretary*, Island Creek, Mass.

• 1887 •

In a Class of more than 200 which graduated only 52 in 1887, the names of many former members gradually disappeared from the class lists kept by our various secretaries. Of those with whom we used to keep in touch, we now know of only four, all nearing the 90-year mark.

Recalling the 60th Reunion of the Class of 1887, a three-day affair at the Hotel Beaconsfield in Boston in June, 1947, 18 sat around the banquet table — only eight,

however, were the old boys. The real charm of the occasion was to have with us our attendants — wives, daughters, nieces. The classmates then present were: Franklin Brett of Duxbury, Mass., Julian A. Cameron, Forge Village, Mass., N. P. Ames Carter, Chicopee Falls, Mass., Ralph E. Curtis, Danvers, Mass., Lonsdale Green, Chicago, Ill., Frederick A. Kendall, Newton Center, Mass., Oscar E. Nutter, Newton Upper Falls, Mass., and Richard E. Schmidt, Chicago, Ill. We heard also from George F. Sever who was then in a nursing home in Plymouth, and from Arthur Nickels of Bath, Me.

In June, 1952, consideration was given to having a 65th Reunion. Enthusiasm seemed to be lacking, or perhaps more correctly, arthritis dominated the decision of the remaining four octogenarians. We have recently heard from them and we shall record brief biographies.

Ralph E. Curtis. Ralph E. Curtis of West Roxbury was one of the youngest members of the Class of 1887. He is now living at 35 School Street, Danvers, Mass. He has two daughters, one of whom is a nurse, the other a school teacher, a married son, Lawrence, who is in accounting and lives in Squantum. Ralph E. Curtis was for 19 years in the designing department of the Boston Edison Company, and was later active in purchasing and accounting.

He had much to do with the construction of the Everett Refining Plant when it was first built. Later he was associated with the New England Fuel Company and the Eastern Gas and Fuel Company. He holds a much prized award for 65 years of service from the mechanical engineers. He and Mrs. Curtis, who passed away more than a year ago, have always been interested in civic affairs and they were both staunch supporters of the local Congregational Church.

Oscar E. Nutter. Oscar E. Nutter still lives at 1174 Boylston Street, Newton Upper Falls. Years ago we knew of him as being connected with the textile machinery business. Requesting a brief autobiography, he listed the following interesting story. "Mrs. Nutter and I are doing quite well, but time is taking some toll. We have four children, all married and enjoying middle life. There are five grandchildren, all but two of whom are through college. Two of the grandsons are married, and each of them has a little son, a year old. Harvard, M.I.T., Wellesley, Boston University, B. U. School of Theology, Bates, De Pauw, University of Illinois, General Motors Institute, and New England Conservatory of Music are the places where most of the members of the family have sought wisdom.

"Time has been very merciful to us, as the family chain has never been broken. After having spent 45 years in the textile machinery business, I was retired at the age of 68, and then helped to start the Vita Needle Company in making hypodermic needles; that company has progressed quite well and is sending its product all over this country and to eight or 10 foreign countries. We make medical, surgical and veterinary needles. It is surprising how many animals have the needle applied to them, including cows

and hogs, cats and dogs, chickens, and so on. We have also been called upon to design a needle to be used in oiling ball bearings, and we are furnishing these to many of the large manufacturing companies.

"One son and two grandsons are in the business, so it is obvious that I do not have much to do, but it is interesting to have just a little work." We understand that Mr. Nutter is at present enjoying a summer vacation with numerous members of his family (16 at one luncheon) at Pocasset on Cape Cod.

N. P. Ames Carter, prominent civic leader, is receiving birthday cards and well wishes. The members of the Chicopee Kiwanis Club especially are sending their congratulations as he is recognized as having been the motivating power in its organization in 1924. Ames has lived in Chicopee Falls all of his life. Now in retirement, he was in the electrical construction and supply business in Springfield for 30 years, from 1890 to 1920.

In his younger days Mr. Carter played a prominent part in almost every phase of Chicopee's civic and cultural development and is perhaps best known for 24 years' service as chairman of the Chicopee School Committee. He was instrumental in planning and constructing the beautiful high school building on Front Street. During his 10 years as president of the Chicopee Library Board, the new Chicopee Library building was erected from designs by his Technology classmate, Guy Kirkham of Springfield.

At the beginning of World War I, Governor McCall appointed him cochairman of the Chicopee Public Safety Committee. As food administrator he recalls learning many unsuspected, yet legal uses for sugar — makers of printer's ink could be granted a quota and honey bees came in for their share. In later years Mr. and Mrs. Carter traveled extensively, and gave illustrated lectures as a result; Iceland, and Spitzbergen, a month on the Nile, Brazil and Patagonia were some of their subjects. A long cruise around the world gave them glimpses of India, China and Japan. Mrs. Carter passed away in December, 1952. Still in good health, Mr. Carter continues to lend his talents to civic and cultural undertakings.

Richard E. Schmidt. Immediately following graduation he started his architectural career, one of his earliest ventures being the designing of the Montgomery Ward Building in Chicago. His firm's reputation (Schmidt, Garden, and Erickson) for designing hospitals spread far. During both world wars they were called on generously by the government. There are notable examples of their hospital work. Other fields of design and construction have been so extremely varied that a list is almost amusing — monuments, mausoleums, homes, hotels, packing houses, factories, breweries, restaurants, club houses, golf courses and swimming pools.

Richard E. Schmidt was building commissioner of the city of Chicago from 1934 to 1942, and won a well deserved reputation for his strict adherence to building code rules. In middle life astronomy was Schmidt's major hobby, which led to his purchase of a \$12,000 reflecting telescope,

set up in his own back yard at 113 East Bellevue. His reports on new discoveries were gladly accepted by astronomical societies with which he was associated.

Notwithstanding outside activities, strict attendance to his architectural business has characterized Schmidt's long career. Mrs. Schmidt passed away a number of years ago. Recent hospitalization temporarily slowed his activities, but a letter says, "Back in the office by nine every morning, and I leave it at 5:30 P.M." Dick Schmidt has certainly had a very active and useful career.

If this article comes to the attention of any other '87 men will you please write to your Class President. We would love to again get in touch. — N. P. AMES CARTER, *Secretary*, 22 Grove Avenue, Chicopee Falls, Mass.

• 1890 •

Four members of the Class sat in at the luncheon on Alumni Day, June 15 — Burley, Greenlaw, Tilson, and Packard. It was Burley's first time out after leaving the hospital, and we are proud of the grit he showed. Only Packard represented the Class at dinner that night. Two others we had expected to be there were unable to make it. Spaulding Bartlett was in the hospital for several weeks. He wrote in August that he has to move "with a very slow and stately tread; also it is annoying to be obliged to stop and consider every time I wish to make any kind of a motion, whether getting out of the chair or grabbing my B.B. gun to pop a cat hunting birds in my yard."

Bertram A. Lenfest died on August 5 as the result of a fall on the steps of his home in Brooklyn, N.Y. He told us at a reunion that after graduating from high school he learned the machinist trade before coming to M.I.T. to study Mechanical Engineering. After graduating he did some work at textile mills but soon began teaching and was at New Haven, Conn., and Waltham, Mass., before becoming Associate Professor of Mechanical Design at Penn State College in 1904. He received his degree of Ph.D. at Yale in 1905. The next year he became a teacher in Brooklyn and for many years was head of the Department of Metal Work at the Brooklyn Technical High School, the largest in the United States, with 4,000 pupils and 35 teachers under him. In 1938 he retired and gave much time to the genealogy of the Lenfest family, traveling across the country yearly, and to Europe. He was a very regular attendant at our reunions and will be much missed.

Mrs. Sophia Gregoria (Hayden) Bennett died February 3, 1953, of a cerebral hemorrhage after only a few days' illness. She it was who first gave M.I.T. '90 national prominence. A classmate, Miss Lois Howe, has written that on receiving a telegram asking her "to enter the competition for the Women's Building at the Columbian Exposition in Chicago in 1891 she suggested to Mrs. Bennett that the latter might also try for it." This, Mrs. Bennett did and won and supervised the construction of the building which was quite large and elaborate. Rand-McNally's *Columbian Album* for November 6, 1893, has a picture of this building, fronting on a

lagoon, with the following comment: "The Woman's Building was designed by Miss Sophia G. Hayden of Boston; the size is 200 by 400 feet; the style of architecture is Italian Renaissance. In artistic conception, delicacy of line, and grace of detail, it is a fitting illustration of the high position held by women in the world of art."

We have almost no information about Mrs. Bennett after this, so the Secretary called on Miss Bragg for help and she very kindly went to Winthrop and reported the vital statistics and, also, that Mrs. Bennett's house had an addition which Mrs. Bennett and her husband both used at one time as a studio. On top a pile of rubbish she found what appeared to be the medal Mrs. Bennett received in 1892 and proposes to give this to M.I.T. Born in South America, the daughter of an American father and a Spanish mother, Mrs. Bennett was quiet and retiring and perhaps not fitted for professional competition and probably did very little professional work. By some she was considered "unsocial" but others reported her well informed and with an interesting and cultivated mind.

A call on Chester Carlton at Milford, N.H., found him looking well and with a good coat of tan. He said that he usually spends the morning, if it is good weather, working his son's farm, but the afternoon is devoted to resting and reading good literature. In this way he manages to keep in condition.

Classmates have already received notice of the resignation of Charles Sherman as Assistant Secretary of the Class. Charles has been extremely helpful and has furnished much information and made suggestions about classmates with whom the Secretary had no contact, and we regret he feels he should resign. Acting in accordance with the class bylaws, Frank Greenlaw has been appointed Assistant Secretary as of August 1, 1953. He has been one of our most dependable members and we appreciate his acceptance. — GEORGE A. PACKARD, *Secretary*, 53 State Street, Boston 9, Mass. FRANK M. GREENLAW, *Assistant Secretary*, 36 Bull Street, Newport, R.I.

• 1891 •

I am sorry to say that at the time I'm writing this our Secretary, Frank Howard, is laid up and, under doctor's orders, is supposed to stay in bed for a month. So I am pinch-hitting for him as best I can. Our 62nd Class Reunion was held at the Country Club in Brookline on Saturday, June 13. There were 12 of us present — Earl, Walker, Brown, Read, Tappan, Dana, Bunker, Cole, Moore, Warren, Young, and our Honorary Member, Horace Ford. Four of our regulars were absent. Damon went to London for the coronation; Frank Howard was in the hospital for a check-up. Wilder was unable to come and Douglass wrote that he had to plant his garden as the rainy season was just over.

The Reunion was a very pleasant affair. We sat on the veranda for some time and when we got thoroughly chilled adjourned to the clubhouse and partook of the necessary stimulants needed at our age to keep from getting colds. After dinner Gorham

Dana told the story of Brook Farm. He has just completed the manuscript of these socialistic communities started in the 19th century. The reasons for their origin and disappearance is the subject matter treated.

Horace Ford gave us the story of M.I.T. research departments for the government which are now being separated from the academic departments. This gave us a new insight into what is going on there.

We regret to announce the death of our old friend and Honorary Member of our Class, Professor Harry Clifford. Also, we have just learned of the death of King W. Mansfield on July 22. He lived at Pine Hill Road, East Norwich, Conn. We received and read cards from many members of '91 who were unable to attend. I want to take this opportunity to thank all those members of our Class who have sent in donations to the Alumni Fund.

We have received a letter from Walter Douglass of Dunstable, Mass., which reads as follows: "What a summer we have had so far, practically no rain for eight weeks, and after the spring months with so much water, it seemed endless. I must report to you on the success of my nursing of the berry bushes in June. This is the fourth year of the planting of red raspberries and the cultivated blueberries. The first and second years they suffered on account of dry seasons. Last year we deepened our 125-foot driven well to 486 feet and have a good flow of water from somewhere. All during the dry season this year, the water is up to within eight feet of ground level every morning so we have had two good years for fighting drought."

"We started picking raspberries on July 10 and, including yesterday's garner of 18 pints, have totaled 116 pints, and have more to pick the balance of this week. The blueberries are bearing well this season, and it always takes four or five years to get them going well. Last year we had enough berries to know they were getting a good start but the birds got more berries than we did. I planned this year to outsmart the birds; mostly catbirds were the smart ones. We have six blueberry bushes six feet apart, so I built a light frame and covered it with white mosquito netting. This netting is in six sections and rolls up easily to be put away after the season is over, and ready for future years. So the catbirds are not looting the bushes this year. They are fine blueberries, and we have had a busy time making raspberry jam and raspberry shrub and canning blueberries this week."

"So now you have the story of an amateur fruit-growing old man who was once an active business man helping to build Boston."

We also have a letter from Gorham Dana from his summer place at New London, N.H., in which he says he has seen Frank Howard and he is recovering. It seems he was cutting down trees in his yard and got some of his muscles tied up in some way. Some of us do not realize we are getting old.

A letter from our English classmate, Robert Ball, tells us that the coronation was a great event and that the Queen is a capable and worthy young woman; also, that the change back and forth of owner-

ship of the steel industry has slowed up production. He also hopes we are all in good "fettle." He spends most of his time raising his own vegetables and fighting the pests. — HARRY H. YOUNG, *President*, 290 Main Street, Cambridge 42, Mass. FRANK W. HOWARD, *Secretary*, Bemis Associates, Inc., Watertown 72, Mass.

• 1892 •

The Class was represented at a lunch on Alumni Day by Burnham, Carlson, Ober, and the Secretary; Carlson and the Secretary represented the Class at the Alumni Banquet at the Statler, listening to a very interesting program reported in the last issue of *The Review*.

Through Carlson the Secretary has a report from Channing Wells stating that he visited Sam Weis for a few hours at his home in Chicago on his return this spring from California. He found him in fine condition but not able to do much traveling around.

Wells, his wife, and married daughter with her husband and family, went over to the coronation exercises on the *Queen Elizabeth*. He states that the ship was tremendously crowded and that London, when he arrived, was "crowded from top to bottom." He states that conditions were such that he felt the effects of age and was obliged to come back sooner than he had planned.

He suggests that this fall, members of the Class take a trip to Southbridge and visit "Old Sturbridge Village" in which we all know he has been a leader in reconstruction. He suggests that October would be a fine month in which to make this visit. Before these notes appear in *The Review* the Secretary may have made arrangements for carrying out this visit. — CHARLES E. FULLER, *Secretary*, Box 144, Wellesley 81, Mass.

• 1893 •

Fourteen members of the Class including Baxter, Biscoe, Buchanan, Dearborn, Glidden, Keyes, Latham, Leeds, Edward Page, E. S. Page, Pevear, Pickert, Taylor and Tomfohrde assembled at the M.I.T. Faculty Club, 50 Memorial Drive, Cambridge, on June 15.

Cocktails preceded a delightful dinner, and altogether several hours were devoted to the renewal of old friendships, and the comparison of existing conditions at the Institute today with what we knew about the school 60 years ago. The Secretary read notes of regret and best wishes from several members of the Class who could not make the home port at this time.

At the business meeting L. B. Buchanan retired in favor of Edward Page who was unanimously elected *Class President*, together with Spofford, Glidden and Keyes who will continue to serve as Treasurer, Assistant Secretary and Assistant Treasurer, and Secretary respectively.

We are looking forward to another meeting in June, 1954, when it is hoped even more of the 60 men whose names appear now on the records of the Alumni Association will be with us.

After a long illness Charles Vernon Allen died at his home, 40 Fifth Avenue, New York City, May 15. For 45 years, immediately following his graduation with

our Class as a graduate student in electrical engineering, he had been employed continuously until the time of his retirement, by the Westinghouse Electric and Manufacturing Company. He entered the apprenticeship course of the company in June, 1893, and after passing through various departments where he acquired special knowledge of the export business, he was appointed the Westinghouse Company's representative in Mexico in 1905. In 1921 Allen became manager of the Westinghouse Electric International Company, of which he was treasurer at the time of his retirement in 1938. He lived in Mexico City for many years and traveled extensively on company business in South America, Central America, the West Indies and Canada. Although his chief recreation was golf he had other hobbies, such as photography, water color, charcoal and pastel work. His son Howard Brigham entered M.I.T. with the Class of 1918, but left to enter the First World War in 1917. His grandson Gale Allen entered the Institute as a student in Course XV in 1943.

He is survived by his wife, the former J. Abigail Jones whom he married on January 2, 1894, and who is now living in California; a brother, Carlton B. Allen of New Rochelle, N.Y.; a son, Howard B. Allen of Mountain Lakes, N.J.; a daughter, Mrs. Louise Schell of La Mesa, Calif.; four grandchildren and three great-grandchildren.

The following item, of especial interest to our classmates appeared in the *Boston Herald*, September 11. "Honorary membership in the American Society of Civil Engineers, the highest honor in its gift, has been awarded to Charles M. Spofford, M.I.T. Professor Emeritus of Civil Engineering." Mr. Spofford is also the senior member of the well-known firm of Fay, Spofford and Thorndike, consulting engineers, established and still doing business in Boston since 1914.

Loring Ellsworth Pierce who attended the Institute for one year as a freshman with our Class, died on May 26. He was a native and life-long resident of Lexington, being descended from one of the town's oldest families. For more than 20 years he had been treasurer of the Lexington Home for Aged People, and had served as mailman in the Lexington District for 18 years until he retired in 1928. He leaves a nephew Howard S. McManus of Lexington, and a niece, Miss Madeline E. Pierce of Poughkeepsie, N.Y., a professor of zoology at Vassar College. — FREDERIC H. KEYES, *Secretary*, Room 5-213, M.I.T. Cambridge 39, Mass. GEORGE B. GLIDDEN, *Assistant Secretary*, 99 Chauncy Street, Boston 11, Mass.

• 1894 •

Alumni Day found Bean, Clafin, Warren and Prescott among those at the splendid and excellently arranged luncheon in the Court, but we missed the faces of Batson and Hunt who are usually on hand for this occasion. Bean and Prescott were at the dinner at the Statler in the evening.

A few days before the event the Secretary had a most enjoyable call from George Sherman who had come on from Akron to attend a fraternity reunion but

could not linger. We had a pleasant hour discussing old times, recalling classmates, and swapping family news. George is justly proud of a fine crop of grandchildren as well as of his children who are all tops. The four sons of his daughter, Mrs. Edward H. Hawkins, form a really notable group. The eldest is a graduate of Princeton and the Harvard Law School and now at work in Cleveland. The second held a special scholarship at Harvard and is now at Oxford on a Fulbright Scholarship and working for a degree there; the third son is in his third year at West Point, and the fourth is a student at Haverford. Another daughter married Arthur Pittenger, who was a lieutenant colonel in England and France, and has two lovely daughters who were married in 1952. George's son, Philip, began his career at the University of Akron where he was adviser of men, and after four years in the Air Force in the South Asiatic Service returned to the University as Assistant Dean. In 1950 he joined the Goodrich technical and research service in the chemical field. He has one son. It seems to be a notable family and George should be proud.

Charles Abbot had carried on his brilliant studies in solar radiation and its influence on weather for many years and is convinced that predictions of general rainfall and weather may be made for many years ahead as a result of the cyclical data he has accumulated. A comprehensive report entitled "Solar Variation, a Leading Weather Element," was published by the Smithsonian Institution in August. Although Abbot's results have not completely convinced the professional modern meteorologists, others who have long been weather observers seem to be greatly impressed by the work of Abbot, and see much in his carefully collected and thoroughly digested facts. We who have known Abbot's career for more than 60 years will still believe he has the key to long range prediction.

Alan Clafin has removed his business office during the past year and is now located at 113 State Street in downtown Boston. It is expected that Alan will gladly undertake the planning, with some help from the Secretary, for '94's 60th anniversary of graduation which comes next June. Although all octogenarians are few in numbers compared to 25 years ago, we hope another reunion can be successfully carried out. Keep it in mind, fellows, and plan to come once more.

It is with great regret that the death of Henry B. Dates must be recorded. For many years the very competent head of the Department of Electrical Engineering at Case Institute of Technology at Cleveland, Dates resigned from this position in 1939, but remained for two years as director of evening classes there. He was considered a top authority in the field of illumination, and wrote extensively in this branch of engineering. He was also active in civic affairs in Cleveland, and was chairman of the Cleveland Sight-Saving Council for many years, and also a member of numerous engineering societies. He was highly regarded as a consultant. After his wife died in 1946, he made his home with his daughter, Mrs. Gertrude D. Bletler at Grosse Pointe, Mich. Here he passed away on May 17, at the age of 84. The

Class has thus lost another member noted for his ability, his fine character and personality, and his always friendly bearing.

For the Secretary the summer just passed was a notable and enjoyable one. Two events contributed especially—the national meeting of the Institute of Food Technologists in Boston in June, and the dedication of the Dorrance Building at M.I.T. which immediately followed. At the first general session of the I.F.T. at the Statler Hotel the Secretary was called upon to receive a beautifully illuminated "Citation," presented as a tribute in recognition of his part in founding this organization of now nearly 4,000 members, and for his work as a teacher and leader in the field of food technology for more than 50 years. It is not possible to quote here the laudatory statements in this document, but they were sincere and expressed in a way which could not fail to evoke a deep sense of appreciation and pleasure on the part of the recipient. It was a high reward for years of enjoyable effort.

Then, on the day of the exercises dedicating the new building to house the Departments of Biology and Food Technology, a handsome metal tablet was unveiled, designating the location of the Samuel Cate Prescott Laboratories of Food Technology, named in honor of your Secretary. At the afternoon symposium in which a group of papers of high distinction formalized the dedication of the Department, a gold key to all offices and laboratories was presented to your Secretary as an additional honor. It was a source of special gratification and untold pleasure to receive this key, given by Dr. Bernard E. Proctor '23, a student and colleague for years, and now head of the Department, and that at his suggestion the actual presentation was made by Dr. Karl T. Compton. How could any series of events and acts of recognition of a retired teacher be more heart-warming and rewarding?—SAMUEL C. PRESCOTT, Secretary, Room 16-317 M.I.T., Cambridge 39, Mass.

• 1895 •

Your Secretary had a wonderful time this year attending the June alumni festivities through the columns of *The Review*. This perusal of events recalled the many happy times we had together as a Class during the heydays of our youth as fledgling alumni. Unfortunately our years prevent some of us from continually sitting in the "front row."

The fertile brain of our mate, Gerard H. Matthes, produces once more a most interesting article on "Quicksand," published in the June, 1953, issue of *Scientific American*, page 97. If you have not seen the article, it will pay you to get a copy or borrow one from your public library. Enjoy this intriguing story of his experience. Gerard learned about his subject in the hard way. As an engineer for the U.S. Geological Survey around the turn of the century, he led a surveying party into the Far West. When a river had to be crossed, he would ride into it on horseback to find a ford that could be negotiated by a heavy covered wagon drawn by four horses. He soon learned how to recognize and avoid quicksand, and how to extricate mired men and animals.

Matthes came into his profession in a natural way, since his early interest in waterways was fostered by an uncle who was chief engineer for Holland's dikes and canal system. At Tech he specialized in hydraulic engineering, and graduated as a civil engineer. You may recall some of his connections with various government agencies and private power companies on irrigation, reclamation and flood control. As a War Department engineer in the early 1920's, he surveyed the Tennessee River and its tributaries. His comprehensive study embracing water power, flood control and mineral resources, was used in creating the T.V.A. some 10 years later. You may recall his directorship of the U.S. Waterway Experiment Station, at Vicksburg, Miss., when he received a medal of reward for his services. We hope he will relate from time to time many other fascinating happenings from his vast field of professional experiences.

Judson Dickerman writes he is still holding his own after the several compulsory visits to his doctor and the hospital. Much to his regret he has turned the operation of his auto to his efficient good wife and daughter, while he calmly resigns as a back-seat driver, with the great privilege of enjoying the passing scenery. However, he still holds the responsibility of keeping the car in the best working condition. Approaching the years of 80, he maintains contacts with his music and cultural subjects, and has been an attendant for some years at the Lake Chataqua conferences and recitals. Incidentally, your Secretary learned that Billy Hall and Dick were classmates in their youth, attending public and Sunday school. How some minds do run together, since they finished together as classmates of 1895—LUTHER K. YODER, Secretary, 69 Pleasant Street, Ayer, Mass.

• 1896 •

The 78th anniversary of the Alumni Association of M.I.T. was featured among other high lights with a perfect day. Those present at the luncheon in Du Pont Court included Bill and Dorothy Coolidge, Bob Davis, Charles Gibson, Hattie Gates, Henry Hedge, Paul Litchfield, Myron Pierce, Sam Smetters, and Mr. and Mrs. Lythgoe. For the first time we were seated at a table under the big top, including service. It was a novel experience to accept these evidences of distinction which accrue with the years. As had been announced we were to hear Bill Coolidge describe his recent African motor trip, and enjoy an hour of graphic evidence of his photo wizardry, which included many high lights of the unique trek through darkest Africa. These slides were shown during the cocktail party and were made on a three-months' safari which he and Dorothy made this past winter.

"They flew to Capetown and there joined the four other members of the party and their two chauffeur-guides. In the following 60 days they were driven 8,000 miles in the Union of South Africa, the Rhodesias, the Congo, Uganda, Kenya, and Tanganyika. From Nairobi they flew to Addis Ababa and thence to Cairo. High spots of the trip included hunting wild life with the camera in several of the game reserves, a visit to Victoria Falls, a boat trip on lake

Tanganyika, a visit to the great volcanic crater of Ngorongoro and a view of the highest peak in Africa, Mt. Kilimanjaro. They especially enjoyed the visit in Egypt to the valley of the Kings and to the Egyptian Museum (in Cairo) with its wonderful treasures from the tomb of Tutankhamen."

The showing of these pictures supplemented by the cocktail hour gave us all a splendid opportunity to discuss our aches and pains and enjoy perhaps the happiest hour of a full day. We adjourned to the main dining room and took our seats at one of the honor tables under the speaker's platform. Those present at the cocktail hour and dinner were, Davis, Driscoll, Hedge, Howard, Gibson and guest, Litchfield, Rundlet, Smetters, Pierce, Rockwell and Damon. The discussion as to how best to carry out our future reunions centers, around the wisdom of repeating our efforts of this 58th anniversary. That is, participating in a program of one day's duration, attending the various functions of Alumni Day, including our very satisfying get-together in our own private room at the hotel in which the main banquet was held.

The following letters were received during the summer which I quote in full. From Myron E. Pierce: "I am enclosing a clipping from the *New York Times* of July 23, 1953, in regard to the marriage of our old friend Bakenhus. Blanche and I are headed for the Poconos for a three-week vacation with her niece and family at Pocono Lake Preserve. We are amplifying and extending our vacations as time goes on. In Florida this winter we discovered Sanibel Island near Edison's Fort Myers and enjoyed watching the big, glamorous birds around Lake Okechobee with an Audubon party. I did enjoy being with you at commencement, and hope I may be with our classmates oftener in the future."

From Henry Sears: "The mail brought the July Review while I was thumbing some of my old '96 papers and among them was Charlie's letter which I thought you might wish to see. I have given up class work at the University but have a few students to tutor. Just enough to keep me interested, and I trust, helpful. A severe hail and wind storm caused much broken glass and punched through our roof. Repair work has kept me busy much of the summer. It would be fine to relive our '51 get-together. How about it? I want to see all of the fellows again soon. Please add enclosed check to your class fund. With best wishes for you and Fred."

Here is Charlie Locke's letter which was enclosed and which is dated July 18, 1946: "I have your letter indicating that you are now back home and have received the class photo. I can identify the various people for you by saying that you are correct in naming the man at Barker's right as P. B. Howard. The man between Con Young and Joe Harrington is Charlie Stamp, who was a newcomer this year, and with us only on Friday, so that it is not surprising that you did not know him. The man to the right of Charlie Tucker is Eddie Mansfield. The man between Dan Bates and Walter Stearns is John Ashton, who was another newcomer this year, but he was with us from Wednesday to Satur-

day, so that you should have come to know him. I am unable to make out any face between Stearns and Litchfield. I think you were misled by the flowers on Mrs. Young's hat and by the flat part of the window sill in the background. You are right that Breed is between Moat and Sager. The man at the extreme right is Fred Rundlet, and was another newcomer this year, and that was only for Friday, so that you would not be so likely to know him. I am a little surprised that you were unable to identify Eddie Bragg as being seated in the front row left. Just to make sure that you have everything straight I have traced a diagram from my photograph, which I assume is the same one that you have, and have supplied a key to the numbers thereon.

"As I look back on our Reunion I feel definitely that it climaxed all of our previous five-year anniversaries. I don't think that I have yet quite recovered from the shock of the tribute which the Class paid me, and I am tremendously proud of the way the Class reacted to my appeal for contributions to the Alumni Fund, especially when they were at the same time, unknown to me, being solicited by Johnny Rockwell for a gift to me.

"I am carrying on my work at M.I.T. this summer taking things lightly and getting away for long week ends at the old home in New Hampshire. I gave my last lecture in June, so that I have finally become professor emeritus in fact. Nominally I became professor emeritus three years ago. With all good wishes . . ."

We hear quite frequently from John Tilley. Fred and I have invited him to come to Cambridge in the near future for a day or two and maybe meet some of the local boys. Change of address: Charles M. Stamp to No. 1169 French Avenue, Lakewood 7, Ohio; William M. Andrew to No. 86 Freemont Avenue, Battle Creek, Mich. — JOHN A. ROCKWELL, *Secretary*, 24 Garden Street, Cambridge 38, Mass. FREDERICK W. DAMON, *Assistant Secretary*, Commander Hotel, Cambridge 38, Mass.

• 1897 •

Alumni Day this year found a lesser number of class members and guests in evidence than usual, but those present enjoyed a happy reunion. At the noon-day luncheon were Mr. and Mrs. Worcester, William Binley, Jere Daniell, John P. Ilsey, Edwin R. Olin, Gilbert H. Pratt and your Secretary. We greatly missed those who were usually with us as Mr. and Mrs. Wadleigh, Mrs. Daniell, Mrs. Ilsey and L. S. Cowles. At the evening banquet at the Hotel Statler were Harry Worcester, Walter Humphreys, Jere Daniell, William Binley and your Secretary.

The several sons of our late classmate, George A. Moran, Course V, hold responsible positions with Calco, a Du Pont plant in New Jersey. George was head chemist at the Pacific Mills, Lawrence, Mass., for many years before going to the Calco plant where he served for 12 years as a member of the Technical Service Laboratory. One son, William J. Moran '33, Course V, has been appointed a group leader in Department G. development of the Calco plant. He will be responsible

for developing processes for vat dyes and their intermediates. After receiving his degree from M. I. T. he continued his studies at Princeton and Rutgers Universities. Another son, A. E. Moran '34, Course V, is a senior chemist in Department G. of Calco, and still another son, George, was a colorist in Department G. until he entered military service. Surely this is a commendable record of employment in one company of a father and three sons.

Through the kindness of Mrs. Oliver H. Buck of Buffalo, N. Y., we have received two newspaper clippings announcing the death of her father, Edward F. Strong, Course II, on July 29 after four years of illness. Mr. Strong was for 20 years manager of the Empire Lamp Sales Division of the National Lamp Works, General Electric Company, Buffalo, N. Y. After graduation he managed a coal business in Colchester, Conn., until 1905. In 1906 he started his 37 years of service with the General Electric Company as manager of a lamp factory in Danvers, Mass. In 1918 he managed a plant in Providence, R. I., where the first Christmas tree lights were made. Transferred to the Buffalo plant in 1923 he worked as manager of the sales division until his retirement in 1943. A few months after his retirement, he became personnel manager of the Buffalo Tube Works until 1946. In past years he took a prominent part in promoting outdoor lighting displays during the Christmas season. He leaves two daughters, two granddaughters, and two brothers.

The sympathy of the Class is hereby extended to our classmate, Gilbert H. Pratt, in the loss of his wife on May 15 after 53 years of wedded life.

At the reading of the will of Luther R. Sawin, whose death was noted in the July Review, it was found that a friendly old parrot named Jerry was an heir. Luther set aside the income "from my accounts at 14 savings banks in Greater Boston" for the bird's support. He named a sister, Mrs. Vera S. Barnes of Cambridge, as attendant to the bird, and provided, should she "fail to qualify," that Jerry should be sent to the Massachusetts S.P.C.A. for permanent care with the estate paying costs. At the bird's death a quarter of the savings account must be paid to the Masonic Home for the Aged at Charlton and the remainder to the S.P.C.A.'s Angell Memorial Hospital. — JOHN A. COLLINS, JR., *Secretary*, 20 Quincy Street, Lawrence, Mass.

• 1898 •

Here continueth the saga of the 55th Reunion of the Class of '98. The Class has already heard about the Reunion from the presidential duo, Lester Gardner and Dan Edgerly. Further details were promised in class notes. As others are interested in the doings of the Class, we will recapitulate a bit. The 55th Reunion was a three-day affair. The Class participated in the functions of Alumni Day, Monday, June 15; and then continued the Reunion on Tuesday, June 16, and Wednesday, June 17. On Tuesday, June 16, we were the guests of Mr. and Mrs. Roger Babson at Babson Park, Wellesley; and on Wed-

nesday, June 17, we were the guests of George Cottle and Mrs. George (Elsie) Treat at the Country Club, Brookline.

As sagas are necessarily extensive, especially if significant details are chronicled, we will spread the material over three issues of The Review, allotting one day's happenings to one issue of The Review.

We regret that we cannot include in these notes the entire presidential letter; Lester's gracious tributes, Dan's statistics, and Dr. Tallant's "Irish Blessing." For the sake of a permanent record, we quote from the statistics in part: "The 55th was a joyous affair. Thirty-five classmates from 14 states were present. There were about 75 present. Howard and Harriet Bodwell autoed from California, our longest distance classmate. We had numerous letters from classmates who wished to be with us."

A detailed tabulation shows that 43 per cent of the 1898 graduates are living. Tabulation of graduates and non-graduates was according to course and residence by states with the final summation, Graduate—84, Non-Graduate—52, Total—136.

Dan, with his flair for tabulation and compilation, has been kind enough to send us a list, not included in the letter, of classmates who attended the 55th Reunion: California: Howard and Mrs. Bodwell; Kansas: Carl High; Illinois: Dan Edgerly; Missouri: Edmund Little; New York: Lester Gardner, Paul Wesson, Ralph and Mrs. Horton; New Jersey: Karl and Mrs. Waterson; Pennsylvania: Miss Alice Tallant; Maryland: Robert Lacy; District of Columbia: Lyman and Mrs. Hewins; Maine: Van and Mrs. Lansing; New Hampshire: Willis and Mrs. Learned; Connecticut: Alvan and Mrs. Davis; Rhode Island: Frank Perry; Massachusetts: Roger and Mrs. Babson, Elliott and Mrs. Barker, Arthur and Mrs. Blanchard, Elwell Butterworth, Edward and Miss Chapin, George Cottle, Fred Dawes, Dave Fenner, Abraham and Mrs. French, Clarence Goldsmith, Fred Jones, Mrs. Mabel Lambert, Edward and Mrs. Milliken, Mrs. Pliny Morrill, Julius Nolte, Joe Riley, William Robinson, Ernest and Mrs. Russ, Lamont Rich, M. de Kay Thompson.

Thus, it will be seen that approximately 25 per cent of the Class (35 out of 136) attended the 55th, some coming from considerable distances, viz., Chicago, St. Louis, Kansas and California.

The reunion headquarters was at Hotel Vendome, Commonwealth Avenue, Boston. Classmates started arriving on Sunday, June 14; some eager classmates arrived even a few days earlier. Through the courtesy of George Cottle, vases of lovely red roses were placed in the rooms in the hotel of lady guests.

We continue quoting from the presidential letter: "Guests add a great deal to a Reunion. A list of this interesting group is given below: Dr. and Mrs. Karl T. Compton; Dr. and Mrs. Edward B. Hinckley, President of Babson Institute; Mr. and Mrs. Walter H. Gale '29, Secretary of M.I.T.; Dr. George R. Harrison, Dean of Science, M.I.T., Honorary Member of '98; Mr. George M. Rideout; Mr. George Babson of Babson Institute; Mrs. Elsie Treat;

Miss Frances Curtiss, who attended our graduation and Class Day in 1898; Mrs. William H. King; Miss Marion Chapin; Dr. and Mrs. Holden Furber; Miss Louise Barker; Mrs. Miriam McKown; Master Richard McKown; Mrs. Carol M. Perry; Miss V. H. Suter; Mrs. William A. Clough; Miss Clough; Dr. Miles S. Sherrill '99; Mr. Theodore Morrill '31; Karl W. Waterson, Jr. '57; Robert Jones, grandson of F. A. Jones.

Prior to the Reunion there was a question as to whether it should be a three-day affair. There was some apprehension that to ask the members of the Class to participate in Alumni Day and then reunite for two days further might prove too great a strain. It was even suggested that it might be wise to have a trained nurse in attendance against any possible untoward emergencies. How bravely the Class came forward and dispelled all fears and doubts! On Alumni Day 27 members and guests came over to M.I.T. to inspect the buildings and to foregather and renew acquaintance with the M.I.T. staff and Alumni of other classes. A special table was arranged for '98 at the alumni luncheon in Du Pont court. (See page 504, July issue of *The Review*.) Lyman and Mrs. Hewins were at the luncheon but arrived late, as Lyman was interested in inspecting the new M.I.T. towing tank. It will be remembered that Lyman was in charge until recently of the immense towing tank of the U.S. Navy, situated alongside the Chesapeake and Ohio Canal, a few miles up from Georgetown, Washington. Karl and Mrs. Waterson proudly presented their son, Karl, Jr., who attended both the alumni luncheon and the alumni dinner at the Statler. Karl, Jr., enters M.I.T. this fall, and we all wish him every manner of success.

Sixteen intrepid members of the Class attended the Alumni Banquet, viz., Barker, Bodwell, Chapin, Dawes, Edgerly, Gardner, Harrison, Hewins, High, Lanning, Little, Milliken, Perry, Russ, Waterson, Wesson.

So much for Alumni Day. Now for a few notes that have accumulated in the interim. Dr. Harold Jones from Orlando, Fla., has kindly sent us for inclusion in the class notes the following write-up concerning his brother and our classmate, Frederick H. Jones: "Frederick Hooper Jones died suddenly of heart failure at his home, 45 Kirk Drive, Rochester, N.Y., on March 23, 1953. Interment was in the family lot in Mount Auburn Cemetery, Cambridge, Mass. He had been head of a department of Sibley, Lindsay, and Curr for more than 40 years and at the time of his death was their oldest employee. He left a widow, the former Maude Ackers of Toronto, Canada, and two children, Alice and Helen. He was a brother of Harold W. Jones, also of '98. A sister, Mrs. Charles A. Newhall, resides in Brookline, Mass. Another sister, Mrs. Bayard Jones, lives in New York City, her husband being of the Class of '93. Fred Jones was born in Cambridge, Mass., April 30, 1876, the son of Frank H. and Elizabeth (Towne) Jones. He received his early education at the Knapp School in Duxbury and entered Technology with his brother in 1894, enrolling in Course V. He remained at M.I.T. for five years but abandoned chem-

istry to enter business for himself. After several years in the art business in Rochester he joined the Sibley Company, Rochester's largest department store, in 1913, becoming buyer and manager of its art department. While at M.I.T. Fred Jones was known as a quiet student who mixed but little in class affairs, but he had many friends. He was a member of K.S. His gentle and kindly character was recognized by all who knew him and his passing will be regretted by his few intimates who still survive."

We remember Fred well and many pleasant conversations with him in the laboratories of Walker and whilst trudging from Walker to Old Rogers.

Harold also wrote a personal note, from which we quote in part, "I was sorry not to be able to go up this year, but many things prevented. Perhaps I shall be alive for the 60th having only left the 75th milestone." Now that's a fine and stimulating note from our experienced and distinguished medico. Members of '98, please take notice and begin to get ready for the 60th!

We are obliged to record that two more of our classmates have recently passed within the Unseen Temple: Frank A. Spaulding of Pittsfield, Mass., on June 17, 1953; and Edwin W. Gehring of Portland, Me., on August 8, 1953. Concerning Frank Spaulding, we have the following notice through the courtesy of the Alumni Association. Identical notices appeared in the *Springfield Union* and *News* of June 18, 1953.

"Pittsfield, June 18 — Frank A. Spaulding, 78, of 62 Noblehurst Avenue, a retired architect and civil engineer, died suddenly Wednesday afternoon. A native of West Stockbridge, he was the son of William C. and Sarah (Alger) Spaulding. He attended West Stockbridge schools and graduated from Williston and M.I.T. He was associated with the late Jay Barnes in this city until 1925, when he retired. He attended St. Stephen's Episcopal Church and had been senior warden, clerk of the vestry, assistant organist and a lay reader in the church. He leaves one sister, Miss Emily B. Spaulding of this city."

We chanced on the following in the Book Review Section of the *New York Times* of August 30. Quentin Reynolds in reviewing the new book, *Ceiling Unlimited: The Story of American Aviation*, comments: "The authors pay tribute to The Institute of Aeronautical Sciences, which made available to them its wonderful library — without question the finest of its kind in the world. The aeronautical archives of the institute contain every authoritative popular or scientific treatise ever written on the subject of aviation, and with such magnificent source material the authors have fashioned a book that will not only hold the young enthusiast spellbound but will be of equal interest to the aeronautical engineer." Members of '98 will readily identify the distinguished classmate, through whose initiative and tireless energy this "wonderful library" was assembled.

The following item appeared in a recent issue of the *Christian Science Monitor*: "M.I.T. Researcher To Receive Medal. Philadelphia, Pa. Dr. George R. Harrison, Dean of Science at the Massachusetts In-

stitute of Technology, will be honored by the Franklin Institute here next month for his work in spectroscopy, it has been announced." All honor to our honorary member!

In next issue of *The Review*, the day at Babson Park. — EDWARD S. CHAPIN, *Secretary*, 463 Commercial Street, Boston 13, Mass. ELLIOT R. BARKER, *Assistant Secretary*, 20 Lombard Road, Arlington, Mass.

• 1899 •

It is with a deep sense of personal loss that I report the death of Earle B. Phelps on May 29. Earle had a brilliant professional career. His first position was bacteriologist at the Sewage Experiment Station of the Massachusetts State Health Department at Lawrence, Mass. From 1903 to 1913, Earle was chemist and bacteriologist of the sanitary research laboratory at Tech, and from 1908 to 1913 served also as assistant professor of Biology and Chemistry at the Institute. From 1906 to 1911 he worked part time as assistant hydrographer of the United States Geological survey. From 1913 to 1919 he was professor of chemistry and chief of the division of chemistry at the Hygienic Laboratories, United States Public Health Service in Washington, D.C. Between 1919 and 1926 he was a consulting engineer in New York City. In 1925 Earle became professor of sanitary science in the College of Physicians and Surgeons, Columbia University, in New York City, in which position he remained until his retirement in 1943 as professor emeritus. He then made his home in Florida and was lecturer in public health at the University of Florida at Gainesville until his death. He was author of *Principles of Public Engineering*, 1925; *Stream Sanitation*, 1944; *Public Health Engineering*, Vol. I, 1948, and Vol. II in 1949 — all scientific works.

While Earle was in Lawrence, I was instructor in quantitative analysis at the Lowell Textile School so we were able to get together quite frequently. When he was in Washington, I never went to that city without contacting him and during most of the 18 years he was professor at Columbia Medical School in New York City, I lectured several times a year in their public health course. Thus Earle and I were able to have many bull sessions. Besides his wife, Earle leaves five children and 10 grandchildren. It was through the aid of his daughter, Barbara, that I have been able to give such a complete history of his professional career. His son, Winston, is editor of the Survey Section of the *Providence Journal*. Earle Phelps was a fellow of the American Public Health Association and the American Association for the Advancement of Science. In 1917 he served on the Advisory Committee of the Council of National Defense; he was an honorary member of the Florida Sewage Works Association and belonged to Sigma Tau, honorary Engineering Society. He received the Clemons Marshall Award of the Boston Society of Civil Engineers in 1926; and, posthumously, the Lasker Award of the American Public Health Association in November, 1953. His name is listed in *Who's Who in America* and *The American Men of Science*.

Alumni Day this year turned out to be one of those perfect June days immortalized by the poet. Carroll, Brown, Ellery, Rickards, Sherrill, Skinner and Witherell showed up at the luncheon (Mrs. Skinner also graced the occasion). Of these, Ellery, Rickards, Sherrill and Skinner (all Course V men, by the way) showed up at the alumni dinner. Edward A. Packard was seen near the registration desk in the morning but did not show up thereafter.

Hervey Skinner, who, most of his professional life, was the senior partner of Skinner and Sherman, consulting chemists, sold out his interest in the partnership several years ago, as has been previously stated in these columns. But "You can't keep a good man down." He is now vice-president and treasurer of the American Conditioning House, Inc., at 11 Melcher Street, Boston. This concern specializes in research, investigations and laboratory work and the like, in the field of detergents and other laundry work.

Changes of address: Timothy C. O'Hearn, formerly on Huntington Avenue, Boston, is now located at 500 Cushing Street, Hingham, Mass.; Bassett Jones, V, long located at Nantucket Island, Mass., is now at 325 East 79th Street, New York City, 21, N.Y.; A. Wallace McCrea from 115 Manhattan Avenue, New York City, to 370 University Avenue, Los Altos, Calif.; John C. Greenleaf from 21 East 52nd Street, to 150 East 50th Street, New York City; William H. Kimball from 1017 First National Bank Building, to 906 Mississippi Avenue, Davenport, Iowa.

Notice has also been received through the Alumni Secretary of the death of Arthur H. Herschel, VI, of Springfield, N.J. on April 27, 1953; of Juan Gaillard of Santiago, Cuba, on March 16, 1951, and of George O. Jackson, College Point, N.Y. on March 14, 1953. Anyone having further information about the above classmates please inform your Secretary.

In the December, 1952, issue of *The Review* I recorded that Charles A. Smith of Atlanta, Ga., suffered a heart attack while visiting his brother in Pasadena, Calif. After recovering he traveled to Dallas, Texas, to visit his daughter and while there suffered a second heart attack. He was finally able to get back to his home in Atlanta, from where he wrote me that he was "doing nothing and resting afterwards." Through Lawrie Turner I have received word that he experienced his third and final heart attack on August 6, 1953. Charles spent most of his early professional life in railway construction and maintenance work in Birmingham, Ala., and Memphis, Tenn., but for many years was with the power company in roadway work in Atlanta, Ga. He was very active in promoting the local M.I.T. Club. — BURR R. RICKARDS, *Secretary*, 381 State Street, Albany, N.Y. MILES S. RICHMOND, *Assistant Secretary*, 201 Devonshire Street, Boston, Mass.

• 1900 •

The Alumni Day exercises on June 15, 1953, were attended by the faithful few of the Class of 1900. Stan Fitch, Fred Lawley and wife, Aleck Newhall and wife, Silverman, Charlie Smith and wife and son Lester, Sterns, Ziegler, and your Secre-

tary sat together at the luncheon under the big tent. After luncheon and a social hour we listened to the formal exercises. The dinner at the Statler in the evening was attended by Fitch, Gowell, Newhall, Lawley, Silverman, Stearns, Ziegler and Allen.

On the following day, Tuesday, the Class gathered, as usual, at The Pines in Cotuit, for our annual Reunion. Although it was not a large gathering it was a most enjoyable reunion. With no set program and no formality the time from Tuesday afternoon to Thursday noon was spent in happy renewal of friendship with nothing more strenuous than shuffleboard. Present were Louis Crowell and his daughters Gita and Lydia, John and Ruth Dakin, Stan Fitch, Bill and Louise Hart, Fred and Minnie Lawley, Charlie Leary and his daughter Frances, Aleck and Alice Newhall, Harry and Anne Thayer, and Lou and Elbert Allen. The Thayers' son Larry and wife joined us at dinner on Wednesday evening. It was the Dakins' first appearance with the Class and they proved to be a valuable addition to the family. These annual reunions have proved to be most enjoyable and we plan to keep them up indefinitely. Each one seems to be better than the last. While the small groups are very intimate and are liked by all, we do hope that many others of the Class will join us in future reunions.

Hal Jouett writes, "We are now living out in the country about 40 miles from New York and 10 miles from nearest railroad station and like it very much except for three days last winter when we were without heat, light, cooking facilities and hot water because of the damage to electric light lines caused by the ice storm." Zenas Briggs has been in the east as usual this summer. His home is now in California.

Theodore C. Tuck, for the last 15 years a partner in the engineering firm of Tuck and Eipel, 101 Park Avenue, New York, died on May 21, 1953, in the New Rochelle Hospital at the age of 74. He lived at 157 Clove Road, New Rochelle. Earlier in his career he was associated with the firm of Post and McCord, also New York engineers. He was a graduate of M.I.T., 1900, Course I. He leaves his wife, Mrs. Molly Tuck; two sons and a daughter by a previous marriage, Theodore E., and Clarence O. Tuck, and Mrs. Caroline Ellis, and a sister, Miss Elizabeth E. Tuck. Tuck will be remembered as an attendant at several of our class reunions including the 50-year Reunion of 1950. We have also received word of the death on September 1, 1953, of Frederic W. Southworth, IV. He has been living at the University Club in Washington, D.C. We shall appreciate it if someone will send us a brief biography of Southworth. — ELBERT G. ALLEN, *Secretary*, 11 Richfield Road, West Newton 65, Mass.

• 1901 •

In the July issue I reported concerning the class gift to the Delaware Hospital in memory of Lammot du Pont. Later, after the notes had gone to *The Review*, I received a letter from Mrs. du Pont which I will give verbatim as it concerns the Class. "May I express my appreciation to

the Class of 1901 of M.I.T. for the four lamps they have given to the Delaware Hospital as a memorial to Mr. du Pont. He, I know, would be pleased with the gift. It is of a lasting nature which will give pleasure to many people. As a matter of fact, a daughter of Mr. du Pont is in the Delaware Hospital and one of the lamps has been placed in her room. Again I want to thank the Class of 1901 for its expression of admiration and affection toward Mr. du Pont. Yours sincerely, Margaret F. du Pont (Mrs. Lammot du Pont)."

It is with much regret that I have to report the deaths of five of our classmates in recent months. A letter from his son notified me that Frank Cushman died on April 27, 1953, at Long Beach, Calif. I quote in part from clippings in the Washington, D.C., papers: "Frank Cushman, 73, a national authority in the field of industrial education, died Monday at his home in Long Beach, Calif. A resident of Washington for 25 years, Mr. Cushman retired from government service in 1946 and moved to California. He came here in 1921 as regional agent for trade and industrial education with the Federal Board of Vocational Education. For 16 years he served as chief of the section's industrial education service. At the time of his retirement he was a consultant in vocational education in the United States Office of Education. . . . He was widely known as a writer on topics relating to industrial education. . . . During World War II he was a Commander at the Navy Department in charge of civilian personnel training. Mr. Cushman was prominent in various scientific organizations. He was also a member and former chairman of the board of trustees of All Souls Unitarian Church. He is survived by a son, a daughter and five grandchildren."

Frederick H. Bass, whom those of you at the 50th Reunion will remember, died on May 13, 1953. This information came from the Alumni Office and I have no further knowledge of any details. The office has also notified me of the death of Mary A. Holt, VII, of Somerville, Mass., on May 15, 1953. No other details are available. Harry A. Hodgdon, II, of Wollaston, Mass., died June 12, 1953. I quote from a newspaper clipping: "Funeral services for Harry A. Hodgdon, 75, of Wollaston, who died suddenly at his summer home in Manomet, were held in Wollaston. Born in Dover, N.H., Mr. Hodgdon had been a resident of Wollaston for 40 years. He had been visiting his summer home in Manomet for 31 years. Retired from a heating and ventilating firm in Boston, where he worked as an engineer, he was formerly a partner with the late Eugene R. Stone, former mayor of Quincy, in the firm of Stone, Underhill Company, heating and ventilating of Wollaston. He was graduated from M.I.T., Class of 1901 and was a life member of the Wollaston Masonic lodge and a member of the Soley lodge in Somerville. He leaves his wife, two sons and four grandchildren."

Ray Murray, I, of Blue Ridge Summit, Pa., died on June 30, 1953. A letter from his daughter says: "It is with considerable sorrow that I tell you that my Father died very suddenly and unexpectedly from a

heart attack on June 30. He was active professionally until the very end. The morning of the day before he died he was doing some rather important consultation work for one of the railroads. Earlier in June he had the satisfaction of learning that a bridge design he had made last autumn in connection with a flood control project in western Maryland had been approved by the government engineers. We all feel sure that he went as he would have wished, here at home with his family (which now includes a lovely great-granddaughter), quickly, without prolonged suffering and active professionally."

I must also report the death of Willard Dow's wife earlier in the summer. I am sure that all the Class extends sympathy to him. I had a pleasant call from Willard about a week ago. He was on his way home from Vermont. I had a letter in June from Greta Gray who has taught in California for many years. She says: "In January, 1949, I had to stop work because of rheumatoid arthritis. We came to the desert hoping it might help and to escape the terrible traffic and smog of Los Angeles. I am an invalid and can do nothing but read, smoke and go for a drive. . . ." I think that she would appreciate hearing from any of you who knew her. Her address is Box 645, Cathedral City, Calif.

I have an interesting clipping from Minneapolis concerning Dr. Jay N. Pike, IV, who was with our Class for two years. I quote in part: "In 1896 Dr. Jay N. Pike set out to build bridges and buildings. Instead, the now 76-year-old Minneapolis man devoted 50 years to the practice of dentistry. Dr. Pike is about to receive an award as 'Dentist of the Year' at the annual meeting of the Minnesota State Dental Association." He continues to practice. He was one of the founders of the Minneapolis Dental Society. For 15 years he was active in figure skating and roller skating circles. He has competed in many national and midwest figure skating competitions. Since giving up skating, tennis and baseball, he has spent his leisure hours fishing. He was at one time a trap-shooting expert and was a regular competitor in national events. He lives with his wife in Minneapolis.

I have just received word from Phil Moore of the death of our President, Al Higgins, but no further details. A complete report will appear in the December issue.

I shall try and devote next month's notes to replies from this year's Class Letter. — THEODORE H. TAFT, *Secretary*, Box 124, East Jaffrey, N.H. WILLARD W. DOW, *Assistant Secretary*, 287 Oakland Street, Wellesley Hills 82, Mass.

• 1902 •

In response to the letter sent out in April by Patch, Robbins writes: "All my business life has been spent in the steel business in manufacturing rather than in sales or any other branch. In 1902, right after graduation, I started to work for what is now the Steelton Plant of the Bethlehem Steel Company, Steelton being a nearby suburb of Harrisburg, the capital of the state. The plant is a completely integrated plant starting with fuel and ore and turning out various finished products

of which the largest tonnage is rails. The plant employs about 6,000 men.

"I had various jobs until 1918 when I was appointed general manager, about two years after Bethlehem Steel Company had bought the plant from Pennsylvania Steel Company. I continued in that capacity, in charge of the plant, until I retired in 1946, just 44 years to the day from the time I started. I then moved to Harrisburg to secure smaller quarters and to be out of the way of my successor, my children having grown and scattered.

"In January, 1947, I was appointed secretary of public assistance in the cabinet of James H. Duff, now Senator from Pennsylvania, who at that time had just taken office as Governor. This was a very interesting job and it kept me fully occupied for the four years of Governor Duff's term of office, that is, until 1951.

"Since then my most active job has been president of the Harrisburg Hospital, a 450-bed institution, to which I was elected eight years ago after a long period of services as a member of the Board. We are just now completing a \$4,500,000 program of additions and renovation, which, of course, has taken much time and effort on the part of many people to plan and finance. Supplemental activities have been Community Chest, the Blue Cross, the Harrisburg Library, and so on.

"I was married in 1909 to Miss Lida Motter of Frederick, Md., and she, fortunately for me is still my constant companion and helpmeet. We have three daughters, two of our own and one adopted, Mrs. R. B. Murrie of Cincinnati, Mrs. S. L. Holverstott of Bethlehem, Pa., and Mrs. Worth F. Fenner of Novata, Calif."

George T. Eagar wrote under date of May 27: "Since coming back from our winter in Miami we have been visiting in Syracuse and in Albany and have been busy repairing and painting our canoes and getting our tents and camp duffle ready for another four months in the woods. We moved into camp two weeks ago for the start of my eighth year as Forest Ranger for the New York State Conservation Department." I quote from a clipping: "Look at the map of Northern New York and 53 miles north of Utica, on Route 28 you will find the village of Old Forge. This is the starting point of the Adirondack Canoe Routes. . . . Traveling from lake to lake, with short portages between, one covers over 100 miles or, with the numerous side trips, many more miles can be added if one has the time and inclination."

"Since 1905, when I made my first trip, I have spent most of my vacations canoeing and camping in some part of this territory. However, some years ago we — Mrs. Eagar and I — decided to take it easy and settled on Seventh Lake of the Fulton Chain as an ideal vacation spot. . . . Half of the lake is private property and the balance is forest preserve. Our camp site is 10 minutes' walk to the nearest habitation and is accessible only by a two-mile trail through the woods or by water.

"When I retired a few years ago, I volunteered and received a temporary appointment as Forest Ranger for the Seventh Lake Area for the summer season.

The season is from the middle of May to the end of September. This last year was my seventh. My duties are to see that the campers comply with the regulations which are few and simple. Only dead or down timber can be used. Camp sites are to be kept clean and sanitary. Care is to be taken in making fires and they are to be put out on leaving. . . .

"I also keep count of the number of canoeists going through — over 600 this past season — and the numbers of campers who use the camp sites. Most of the canoeists stop to see me to renew acquaintance or, in case it is their first trip, to get directions and advice. . . .

"Being a Forest Ranger gives me the opportunity of meeting a lot of interesting people. Our guest books contain the names of hundreds from many sections of the country and many have become fast friends. After four months of such a life, we are well fortified for the long winter evenings when we dream and plan for our next camping season."

Dan Patch has given me the following addresses of men permanently in Florida: Harlen M. Chapman, 1638 Via Tuscany, Winter Park; Lester C. Hammond, 500 Flamingo Drive, Fort Lauderdale; Lieutenant Colonel Howard C. Judson, 3611 Stewart Avenue, Coconut Grove; Austin C. Wood, R. F. D. 3, Camp Myers. He suggests that any intending to visit Florida this winter send in their proposed itinerary so we can get it in *The Review* early.

There have been a few changes of address: John L. Jones is now at 25300 Santa Cruz Highway, Los Gatos, Calif.; Franklin T. Root at 2 West 67th Street, N.Y.; and Charles H. Sisson at 2805 Werk Road, Cincinnati, Ohio. — BURTON G. PHILBRICK, *Secretary*, 246 Stuart Street, Boston 16, Mass.

• 1903 •

Our 50th Reunion began with the commencement exercises on Friday, June 12. We were honored by being given a position in the procession immediately following the Corporation, and with Cushman acting as marshal, turned out 35 strong in caps and gowns supplied by the Institute. Following the graduation exercises, we were the guests of President Killian '26 at a luncheon in Du Pont Court. The afternoon was spent in inspecting the buildings and renewing old acquaintances. It was a fine arrangement to be able to have rooms at Burton House, one of the student dormitories, and men, many with their wives, began checking in on Thursday afternoon. It was a real thrill for Gould, Gibbs and Cushman to greet each arrival.

Friday night was the Class Dinner, at which 54 men and women sat down in the Faculty Club. With I. F. Atwood as master of ceremonies, Fred Eustis gave a greeting to those present, and Cushman read many letters of regret from those not able to be present. Then Howes sprung a surprise, by asking Ruxton to make the presentation of a wrist watch to Fred, and Morse did the same to Cushman. Your Secretaries are deeply grateful, and appreciate the many good things said, some far too flattering, which accompanied the gifts. Atwood then called on Potter, Parker, Morse, and Mitchell for brief remarks, and the Class

elected the present Secretaries for another 50 years. The music of a trio leading the singing of old songs and new, added much to the pleasure of the event.

Saturday morning, in private cars and a bus, a party of about 60 of us journeyed to Fred Eustis's estate in Milton, where we were the guests of Fred and his wife at an informal reception and luncheon. Dr. Compton and President Killian '26 honored us by their presence, and a fine picture was taken of the group, a copy of which appears on page 30 in *The Review*. Mrs. Shurcliff (Margaret Homer), gave a lesson in hand bell ringing to four of the Class, which was fun for both ringers and listeners. Following the reception about 40 of us drove to Coonemessett Ranch on Cape Cod, the rest returning to Boston and other engagements. We had a fine dinner at Coonemessett and spent the evening and all day Sunday visiting together, and really getting to know each other again.

Monday morning we drove back to Cambridge, arriving in time for the Alumni Luncheon where, as the 50-Year Class, we had a table to ourselves and were served. Fred and Mrs. Eustis sat at the head table as they had at Dr. Killian's lunch on Friday noon. Several new faces appeared, Tom Sears, Mrs. Sears and their daughter Victoria, and Cavanagh, we were glad to see. The final event was the Stein-on-the-Table banquet at the Statler on Monday night, where we reported 22 men and about eight women. Again we had still another man, Hepburn, who had not been present before. Fred presented a check for \$25,950, which with the contributions to the Alumni Fund and the Development Fund, made a total of \$75,386.98, given by the Class as its 50th Reunion gift.

The following men and women made up the party, and attended one or all of the various events: I. F. Atwood, A. B. Allen, R. D. Babson, C. L. Bates, H. F. Bell, Mrs. Sophie (Thayer) Blunt, G. B. Bradshaw, G. C. Capelle, A. J. Cavanagh, E. M. Chadbourne, J. T. Cheney, Susan Clarke, E. A. Comer, C. B. Cox, J. A. Cushman, J. J. Dooley, W. O. Eddy, F. A. Eustis, A. H. Eustis, G. H. Garcelon, A. S. Gibbs, L. B. Gould, C. R. Gray, C. F. Green, A. Healy, A. H. Hepburn, R. H. Howes, L. L. Hunter, C. M. Joyce, R. M. Lawton, F. K. Lord, E. H. Millard, W. E. Mitchell, H. S. Morse, J. J. A. Nolan, P. R. Parker, A. A. Potter, E. J. Ruxton, W. B. Regestein, T. E. Sears, J. S. Sheafe, Mrs. Margaret Shurcliff, O. S. Swenson, L. L. Thwing, J. W. Welsh, G. B. Wood, and Mesdames Cannon, Babson, Bell, Dooley, F. A. Eustis, A. H. Eustis, Garcelon, Gould, Gray, Healy, Joyce, Morse, Welsh, Parker, Sears, and Thwing.

Your Secretaries are well pleased with the attendance, and from the letters of appreciation received, we know that those who attended had an unusually, and perhaps, surprisingly, good time. Immediately following the Reunion, we received notices of the deaths of Henry W. Buhler, III, who died in Kittery, Me., on June 19, and of Alexander S. Ackerman, who died in Middletown, R. I., on June 23. Buhler had been engaged in business in Boston for many years previous to his retirement about two years ago. He leaves a sister,

to whom we are indebted for this information. Colonel Ackerman had a long service in the U. S. Army, having served in World War I, being commissioned in the regular Army Engineer Corps since 1920. He was retired in 1944, after having worked on both the Panama and Cape Cod Canals. He was a member of the American Society of Civil Engineers, the Society of American Military Engineers.

Myron H. Clark died on August 30 in Concord, Mass. "Until recently he had been director of the Productivity and Technical Assistance Division, Mutual Security Agency, in Washington, D.C. In 1948 he organized the Labor-Management Institute of the University of Connecticut and was the first director of the Institute. At various times in his career he served as general planning manager of the Johns-Manville Corporation; assistant to the president, Crucible Steel Company of America; vice-president, Reading Iron Company, and in 1927 organized the Boston management consultant firm which bears his name. During World War II he occupied the post of regional management consultant for the War Production Board in New England, and served as a panel member of the National War Labor Board. He will be missed at future reunions as he was always interested in the Class and attended as many of the meetings as he could. He had written us that he would try to get to the 50th Reunion. Cushman attended his funeral in Bedford on September 2.

Of a more cheerful note, the Raymond Concrete Pile Company sends us the following in regard to William V. McMenimen: "Two hundred and fifty members of Raymond Concrete Pile Company honored W. V. McMenimen, vice-chairman of the board of directors, for outstanding service to the company during the past 40 years, at a testimonial dinner at the Waldorf-Astoria, in May. Mr. McMenimen was presented with a bronze plaque depicting in bas-relief many of the construction projects with which he has been associated in the United States and throughout the world. Outstanding projects include: Hudson Tubes; Marquette Docks; New York City subways; hydro-electric plant, Rochester, N.Y.; rock tunnel for the city of Kansas City, Mo.; San Mateo Bridge; Golden Gate Bridge; San Francisco-Oakland Bridge; James River Bridge; Lagunillas sea wall; Charleston Navy Docks; Barranquilla Port; Buenaventura Port; Havana Harbor; Curacao Drydock and Refineries; Liberia Port. . . .

"McMenimen has been with Raymond Concrete Pile Company since 1918, and has directed construction for the company aggregating more than a quarter of a billion dollars. He remains as chairman of the management committee of Construction Management and Engineering Associates, a combination of Raymond Concrete Pile Company, Brown and Root, Inc., and Walsh Construction Company, which is managing the 200 million dollar air base construction program in France under contract with the United States Air Force. He will maintain his headquarters in the New York office." We all join in good wishes to Mac. — FREDERICK A. EUSTIS, *Secretary*, 131 State Street, Boston, Mass. JAMES A. CUSHMAN, *Assistant Secretary*, Box 103, South Wellfleet, Mass.

A class letter was sent in September to all on our list to remind you of our 50th Reunion next June. If you haven't returned the reply card enclosed in the letter, please do so at once. We need the information in planning for the Reunion. If you have lost or mislaid the card or didn't receive the letter, drop us a line to show your interest.

In July a small group of Boston regulars met at the Tech Faculty Club for lunch and agreed to start a booster campaign for encouraging attendance at the Reunion. Some of you may have received letters as a result of this meeting. If you have any ideas as to what should be done or should not be done at the Reunion, please send them along. It is already evident that some want to play golf. Ed Parker (E. F. Parker, 34 Woodward Avenue, Reading, Mass.) has agreed to be chairman of the golf committee so golfers can send suggestions direct to him.

It has for many years been customary for the 50-year Class to make a special gift to the Institute at the anniversary alumni dinner. In recent years, unless there is a special reason for doing otherwise, the gift has been added to the regular Alumni Fund. Gus Bouscaren (L. H. G. Bouscaren, 646 Prospect Avenue, Winnetka, Ill.), our Class Agent, will in due time suggest that you enlarge your regular Alumni Fund gift this year in recognition of our 50th anniversary, so begin saving your dollars. His goal is an average of \$50.00 per man listed on the present class rolls.

As details for our Reunion begin to develop during the next few months you will be kept informed by these notes or by special letters. Read this information, allow your interest to grow and remember that some classmates will be greatly disappointed if they don't see you at Oyster Harbors, June 11 — June 14, 1954.

A few items of class interest have drifted in during the summer. Attendance at Alumni Day was not large but Fellows, Hayward, Hiller, Lang, Munster, Russell and A. D. Smith were glad to see each other. Incidentally, Hiller had a charming lady with him who has since become Mrs. Hiller.

Not long ago we published an item in these notes telling of the activities of Leavenworth Sperry as president and general manager of Scovill Manufacturing Company of Waterbury, Conn. He was re-elected to this job last May which is quite a compliment to a man of 70. The *Minnesota Engineer* for January, 1953, gives a brief biography and excellent picture of Bernie Blum who is cited as "Engineer of the Month." It describes his long service with the Northern Pacific Railroad, and notes his interest in various civic activities. We will be seeing Bernie at Oyster Harbors next June. Apparently Technicolor is not enough to absorb the energy of Herb Kalmus for he has recently been elected to the board of directors of the Stanford Research Institute. The *Hollywood Reporter* sums up an announcement of his election as follows: "Herbert Kalmus belongs to that long line of technicians who have provided glory to American industry. He will represent motion pictures

well whether it be from his seat on the board at the Stanford Institute or in any place of high achievement. We congratulate Stanford on its selection."

Gus Munster has sent us two letters with items of interest. Myron Dole writes from Northwood, N. H., that after his retirement from the M.I.T. Faculty he sold his place in Belmont and moved north to a spot half way between Concord and Manchester. He has a good-sized house and enough land to keep him busy. One of his boys is married and has two children. The other is unmarried. Myron and his wife hope to attend the Reunion. Carl Sheafe writes to Gus from Apopka, Fla., that after 30 years in that part of the country he still enjoys it. Plenty of boating and fishing with a well equipped hobby shop, 24 x 40. The Haywards were passing through Westfield, N. J. recently and made a brief call on the Whittakers. They are planning to attend the Reunion next June.

Bob Phinney after four months in Pakistan and a month in Mexico City is about to leave for eight weeks in Holland. He is hoping to be in this part of the country next June. Henry Kramer is still enjoying retirement in South Duxbury and will try to join us part time at Oyster Harbors next June. Buck Langley is now his own boss after working for the state of Connecticut for 31 years. He keeps his brain turning over, however, in some private consulting work. "General" Holcombe and his new wife are now official residents of Florida. They traveled north during the summer and report seeing the Currier Langs. Holcombe says he has acquired three new grandchildren as a result of his marriage. We are sorry to hear that Bill Eager is afflicted with bone tumor which is quite a handicap. He is hoping to get it under control so he can be with us next June. Frank Severy writes from Santa Monica, Calif., that he is a trailer addict. He plans to head east next spring so as to reach Massachusetts in June. Frank Davis writes of a journey of 3,906 miles in the Dakotas, Montana and neighboring states. He and Mrs. Davis are hoping to be with us next June. Maggie Magnuson has sent us a biography which sounds like *The Education of Henry Adams*. He has had a variety of jobs and has traveled all over the world yet he regrets that he hasn't varied his career somewhat. Cheer up, Maggie, you will have some interesting stories to swap with the rest of us at Oyster Harbors next June.

We close these notes with the sad announcement of the deaths of three classmates; Cyrus P. Howes, IV, of Dallas, Texas, William B. Ferguson, Jr., XIII-A of Brooklyn, N. Y., and Frederick S. Anderson, XIII, of Sebring, Fla. Clippings from Dallas papers state that Howes was retired after long service as bridge engineer with the Texas and Pacific Railroad. Services were held in Dallas, June 8. We learned of Anderson's death through his son, Harry, who states that his father passed away June 27, 1953, after suffering 34 months with bronchial asthma. No details regarding Ferguson are available at this writing.—*Acting Secretaries:* EUGENE H. RUSSELL, JR., 82 Devonshire Street, Boston, Mass.; CARLE R. HAYWARD, Room 35-304, M.I.T., Cambridge, Mass.

Alumni Day in June was quite an affair for 1905, judged both by the attendance and enthusiasm. Present at the luncheon were Mr. and Mrs. Ayer, Mr. and Mrs. Files, Mr. and Mrs. Cronkhite, Henry Buff, John Damon, Court Babcock, Grove Marcy, Doc Lewis, Andy Fisher, Gil Joslin, Bob McLean, Gib Tower, Balkam and myself. It was good to see some who had not attended for some time, namely the Ayers and the Cronkhites. Len told us of a very interesting and apparently prosperous business in the electronic field, with manufacturing and research facilities opposite M.I.T. on Massachusetts Avenue. John told us of his absorption in his farm, and so on, at Strong, Me., and mildly of his being busy otherwise as one of the principal partners (our words) of Fay, Spofford and Thorndike, engineers in Boston. Doc Lewis showed his new book on classroom experiences (mostly humorous) and we strongly advise you to purchase one. It is written in Doc's characteristic vein, and probably more readable for some of us light readers, than most of his scientific writings. Present at the Alumni Dinner in the evening were Babcock, Cronkhite, Joslin, McLean, Shapira, and myself.

The Reunion on the following week end at the Wianno Club, Osterville (Cape Cod), Mass., was a rather slimly attended one, but very enjoyable "gam" attended by Roy and Andrea Lovejoy, Ed and Isa Barrier, Bill and Peg Ball, Bert and Alice Files, Ralph and Grace Hadley, Gib and Elizabeth Tower, Fred and Ruth Goldthwait, Doc Lewis, Henry Buff, Gib Joslin and Walt Eichler. The weather was excellent, the scenery and surroundings wonderful, the "eats" superb and the companionship just what you would expect from '05 men old enough to enjoy sitting and chatting, young enough to exuberate over the fun of living. On Saturday afternoon we motored across the Cape, according to custom, to enjoy the Barriers' wonderful home on the north side of the Cape, to see Ed's grand garden. The Hadleys had to leave early Saturday because Ralph had to play the finals in some Essex County tennis tournament in Lawrence. Shades of Satchel Paige, Bob Newsome, and so on, but that Hadley boy at three score years and ten is still going strong. The Balls also left early for a cruise across to Long Island in their *Rabbit Ears*. Roy Lovejoy is still putting in full time six days a week making knives at his plant in Lowell; as a matter of fact, Bert Files, Gib Tower, Doc Lewis, Henry Buff and yours truly are still on the unretired list, thankful to be able to keep active industrially or commercially. It was decided by all present to get together, probably at the same spot, at about the same time in 1954 and to invite all classmates to join, without any attempt to ballyhoo a 49th Reunion.

Some of those unable to attend reported as follows: Harry Nabstedt: "We retired in 1951 and returned to our native Davenport (city, not couch). Have been very busy during the past 21 years and have had a great time of it. There is always plenty to do if you are willing to take on civic service jobs, such as school board, city planning and joint city-county plan-

ning, Rotary, church and Masonic work. We have enjoyed the best of health and attended my 50th reunion at Exeter in 1951. Best wishes to all my 1905 friends." Frank Elliott "was in Boston early in June, tried to extend trip to take in reunion, but had to leave for home (St. Louis) on June 7. I am mailing a brochure which shows my life's (business) work." Bob Folsom: "I have retired from business (Boston Consolidated Gas and many allied industries) after 47 years and a short time before I retired I had a heart attack and am taking life easy."

Casey Turner: "It is difficult for me to write this as it only records my frustrations. In the first place my doctor has ordered that all of my activities be reduced considerably except light chores of house-keeping, but I blame this principally on the fact that I started too long ago. Class Membership substantiates that. My son, Rod, is taking over very well. Now for the next disappointment. I was glad to learn that the Board of Commerce Cruise would not conflict with our reunion this year, only to learn later that my presence was demanded at the wedding of the daughter of Helen's favorite cousin in Chicago on the 19th. Being a peace-loving citizen, especially family-wise, I will have to go along with the important event. Please remember me to the gang and express my regret at not being with them." Tom Shaw: "Sorry I can't join the 1905 Reunion at the Wianno Club next month. This time I have a solid reason for being absent. I am scheduled to undergo surgery on or about May 26. The surgeons will have more than an average job, because of my long established diabetes, and heart condition. It now seems very improbable that my convalescence period will terminate for several weeks. So I can't be with you, but I'll be thinking about you. Hurrah for '05!"

Hub Kenway: "I have your letter of May 29 but shall be abroad most all summer and so shall miss the festivities of Alumni Day when I had hoped at least to see you for lunch. I am sailing from Norfolk to Portsmouth, England on June 11 on the aircraft carrier *Antietam* with my partner Mel Jenney to carry out a small job for the Secretary of the Navy. The *Antietam* is an interesting ship, with the so-called canted deck of which you may have read. She is going over to demonstrate its use to the British and will carry out flight operations on the way over. I shall be in London a short time and then fly back to Boston. Then before the end of July I am flying to Dublin and shall be in County Down at a shoe factory in which I am interested and manage to visit from time to time."

Charlie Emerson: "You may recall that when you called on me last winter while I was recuperating from a series of operations I told you I hoped to attend the 50-year reunion of my class at Beloit College (Beloit, Wis.) in June. I did so and had a wonderful time. Took my nephew along as driver and modestly let him do about 75 per cent of the driving. We were gone about 10 days and had perfect weather and not a sign of motor trouble in the 2,640 miles round trip. The College did me the honor of a Doctor of Science degree which was an unusual thing for a

liberal arts college to do as ordinarily they don't recognize engineers but confine degrees to lawyers, teachers, pure scientists, and so on. We had a good attendance at our Class Breakfast, about 35 per cent of our total living members. There had been many changes on the campus during the past 50 years . . ." Attached to Charlie's letter was a copy of the Presentation and Citation, which is too long for the space available here. The award was the result of the filing of a complete personnel record which was presented to the Board of Trustees in deciding on the four to receive honorary degrees in 1953. If any classmate wishes a copy of these I will have them copied and mailed on request.

Gene Kriegsman: "Well, Goldie, I would like to repeat the occasion except for the fact that Mrs. Kriegsman and I will be on a tour in Europe about the time of the Reunion. We will take 1200 to 1400 feet of Kodachrome movie film along and if the pictures turn out well will show them at a future reunion if desired. One thing I have on target is the 50th reunion." Bertrand Johnson: "I was retired from the Bureau of Mines on May 11, 1952, as I had reached the statutory age of 70. On August 17, 1952, I was taken back on again on a temporary indefinite basis on three-month extensions. This continued until August 17, 1953, when the work was discontinued, and I was retired again, just before I became eligible for a Social Security pension, to get which I only needed to receive \$50.00 during the last quarter of this year. Now I have got to find a job of some kind that has Social Security status, and make up the deficiency created by the Bureau of Mines. I am not ready to quit work, although I have plenty to amuse myself with in the way of hobbies when I do actually quit the workaday world. I was working on a study of the world's resources of potash when I quit and had completed work on the potash deposits and industry of Africa and Oceania. I am still interested in the subject, and am gathering data on potash in Asia. Have started collecting stamps again. . . ."

Roy Allen: "My present job is an eight-to-nine-hour a day one, with a ½-hour drive both night and morning, and there will be no let-up or vacation before a year from this autumn. The remaining hours of the day seem all too few for this slowing up person to get done what he should do at home. However, I take some pleasure in my work and would be sorry to give it up."

We have an announcement of the marriage of Francis J. Chesterman and Mrs. May Fegley White at Bishop's Chapel Church House, Philadelphia, Pa., on June 30, 1953. Speaking of weddings, I proudly announce the birth of my third grandchild, Scott Warren Bickford, born to my middle (of five) daughter on September 6, 1953."

Maurice E. Weaver, VI, died at Washington, D.C. on May 19, 1953. No details available. Reginald Fitz, V, died at his home in Brookline, Mass., on May 28, 1953. He transferred to Harvard after his freshman year, graduated there in 1906 and from Harvard Medical in 1909. He attained national fame as a physician and medical historian. Arthur J. Amberg, III, passed away at his home in Montclair, N. J., on June 20, 1953. Art attended our

45th Reunion, seemed in excellent health, and no indication to the contrary arose here until his secretary wrote on June 4 that he was away on account of ill health and would not be able to attend the Reunion. He, as you will remember, was our class president during our junior year and very active in class affairs. He was proprietor of the A. J. Amberg Business Equipment Corporation of New York City.

While it is difficult to write obituaries of classmates, it is doubly hard to retract previous announcements of deaths. In the spring of 1949 I announced the death of Richard O. Marsh, I, of Washington, D.C. This was due to a notice from the Alumni Office "deceased prior to April, 1949, according to records of the P.O. Dept." I quote Mark Twain as to the "immaturity" of this announcement, since I have just learned from Bertrand Johnson, III, that Marsh died on September 5 at his home in Vero Beach, Fla. Clippings from the *Washington Post* and *Star* confirm this, hence this release. I quote from the latter clipping. "Mr. Marsh was noted for his engineering and scientific explorations throughout the world. He was the author of the book, *The White Indians of Darien*, based on an expedition into Panama in 1934. Another trip took him in 1940 on a fruitless search to find the end of the Endless Caverns near New Market, Va. . . . Mr. Marsh had done engineering work in Panama and Mexico as well as in the United States. He was responsible for the design and construction of more than 3,000 impounding dams for flood control, water power and water conservation. Son of the late Benjamin F. Marsh, Republican Representative from Illinois, Mr. Marsh was a veteran of the diplomatic service having served as secretary and charge d'affaires of the United States Legation in Panama. He later was stationed with the Latin American and Near East divisions of the State Department. In 1912 he was secretary of the American Embassy in St. Petersburg, Russia. He had also been chief engineer for the Agriculture Department, construction engineer for the Federal Defense Board and hydroelectric expert for the Federal Power Commission. He was a fellow of the American Geographic Society and a member of Science Service, National Academy of Science, the Pan-American Society of Tropical Research and other scientific organizations. He is survived by his widow, Helen; a son, Richard, Jr., of Baltimore, a civil engineer, and three daughters, Mrs. Gerald J. Montgomery, Greenwood, Miss., Mrs. William R. Barnes, Culver City, Calif., and Mrs. Fergus D. Wood, Vero Beach." — FRED W. GOLDTHWAIT, *Secretary*, 274 Franklin Street, Boston, Mass.

• 1906 •

The Class was listed as having 11 members present on Alumni Day, June 15. Those at the luncheon were William Abbott, Sherman and Mrs. Chase, Stewart Coey, Carroll and Mrs. Farwell, Thomas Hinckley, Charles Kasson, Ned and Mrs. Rowe and the Secretary. Six classmates attended the Alumni Banquet; they were Abbott, Carter, Hinckley, Abe Sherman

and the two Secretaries. Dr. Means was listed as attending but did not appear. The attendance was not so great as in some non-reunion years. A number of classmates said that it did not seem possible that our 50th was but three years away, (two years and nine months at this writing) and all agreed that we should now be thinking and preparing for June, '56.

Members of the Class received the first annual class letter dated April 23, 1953, from Class President Coes. The Secretary appreciates the reference to these notes in Harold's letter and his mention of the need for data for this column. A number of classmates wrote to Harold as a result of his appeal and the following items of class news resulted: The Class was represented at the annual meeting of the Northern New Jersey Technology Club by Coes, Coey and Kendall and their wives, and Harold reports a good time. Albert Hemphill, who lives in Montclair, is reported as being quite ill in a nursing home. Chester Hoefer advised that he was planning to attend the 50th at Snow Inn but he would be unable to attend any alumni functions this year as he and Mrs. Hoefer were leaving on May 14 for Switzerland and Austria, not to return until October 1. This accounts for a post card received this summer by the Secretary from Zurich on which Chester wrote: "When one sees the pageant of William Tell at Atdorf which follows Schiller's story, it is a thrill seldom experienced in the dramatic field. Here the natives in an outdoor theater under the trees give a magnificent portrayal of Swiss liberation." The Secretary received another card from Chester from Innsbruck, Austria, dated August 4, which was a copy of a painting of the Goldenes Dachl in that town.

Robert Cushman, II, wrote as follows from Portland, Ore.: "I have looked forward for some time to our 50th Reunion and am always hoping that my strength will increase sufficiently that I may be able to make the trip. As you know, I experienced a heart attack four years ago and was hospitalized for a time. I have not been able to do any work since and confine my activities to a rather small circle of necessity on the doctor's orders. I am active in the Oregon Section of the A.S.C.E., having served quite recently, since my breakdown, as President. Other activities are Professional Engineers of Oregon, Oregon Technical Council, of which I am a director, and I am serving in a minor capacity with a group known as Engineers for Private Enterprise. My first partner for many happy years passed beyond the curtain of mystery three years ago.

"Two years ago I married again, a very wonderful and understanding person, graduate of Bradford Junior College, John Hopkins School of Nursing and post-graduate courses at Columbia. During World War I she had the unique experience of being one of the first group of nurses to embark for France on a troop transport. Our hobbies are colored movies and music. On my many trips east I worked up a 400-foot travelogue covering the scenic Great Northern and Northern Pacific routes, together with the historical features around Plymouth, Boston, the

Cape, and New Hampshire and Vermont. Other films cover our West Coast scenic wonders from Los Angeles to Canada. I have been President of the M.I.T. Club of Oregon for about 25 years. I have attempted to resign several times but have been pressed back into service. Relative to the reunion program, I believe that some stories of adventure connected with your engineering assignments abroad would be most interesting to all. I correspond quite regularly with James Wick, Jr., and if he is carrying out some of his travel plans, he will have an interesting story to tell."

E. B. Bartlett wrote from Milwaukee that he and Dr. Smith thoroughly enjoyed the 45th Reunion in 1951 and advised they would both like to come again if well enough.

Edgar Berliner, now living in Beverly Hills, Calif., wrote the Secretary under the date of June 26 in part as follows: "I forgot to mention in my earlier letter that several months ago I had run across J. I. Banash. We came upon each other unexpectedly at the home of a mutual friend. He had only come out here recently, and appears to have had a very extensive and interesting career. I had not seen him since 'the days that were free from care' and even then did not know him well. But it so happened that we were both good friends of Herb Whiting, and until the latter died in 1937, I always heard about Jim and he would get tidings about me from Herb, but we never met. Under the circumstances, it was quite a thrill our meeting as we did." Banash is now located in Los Angeles.

The Sheboygan, Wis., *Press* of June 29 included the following about William Furer, IV: "A Honolulu resident, visiting his native Sheboygan for the first time in 18 years, was elevated last week to the rank of fellow in the American Institute of Architects. William C. Furer was one of 30 members of the A.I.A., a national professional architectural society, honored June 18 for 'distinguished service' to the profession. . . . An 1899 graduate of Sheboygan High School, Mr. Furer is only the second architect in Hawaii to have been named a fellow of the A.I.A. He has been in semi-retirement in recent years. After receiving his B.S. degree in architecture from the Massachusetts Institute of Technology in 1906, Furer went to Honolulu in 1908 with a small party of engineers who began the original development of Pearl Harbor. In 1917, he entered into private practice at a time when there were only eight members of his profession in Honolulu. He was instrumental in organizing the Architects Society of Hawaii in 1925. A year later, the society became affiliated with the A.I.A. as the Hawaii chapter. He has twice served the chapter as president and for many years was its secretary. Furer's advancement to the status of a fellow in the A.I.A. was primarily in recognition of his work as secretary of the Hawaii Board of Registration for Professional Engineers, Architects and Land Surveyors since 1926. . . ."

Items for this column sometimes appear in unexpected places. The following is an extract from Bill Cunningham's column, which is a regular feature of the *Boston Herald*. Bill is a Dartmouth graduate, got

his D in Football and wields a very versatile pen. The following appeared in the *Herald* of July 21 and was obviously inspired by the prevailing weather: "The weather is beyond comment in polite language, but Saturday I discovered one delightful method of beating the heat. My Mrs. and I were the guests of Mr. and Mrs. Joseph V. Santry, and their house guests, Sir George and Lady Nora Usher from South Africa, aboard the famous Santry racing sloop, *Pleone*, for the viewing of the U.S. one-design races off Marblehead. It was really cool out there in the open, and, as an old America's Cup reporter, who doesn't know a binnacle from a clewed, crosswise, quadrilateral winding sheet, it was a thrill to be on perhaps the finest racing yacht in American waters. . . ."

While on the subject of yachting, your reporter has discovered another yachtsman in the Class, namely Samuel L. Ware, XIII. While shopping in Scituate this summer with Mrs. Kidder and three other lady relatives I met Sam who invited us over to the Scituate Yacht Club. We enjoyed looking over the attractive club house and swimming pool and noticed that Sam's picture was included among the commodores' photographs which decorated the walls. He pointed out his sloop at her moorings off the club float. Sam resides in Abington, Mass., and has been retired about five years. Sam's unmarried daughter is a practicing attorney, a member of the Massachusetts Legislature and as head of the committee on towns has the distinction of being the only "Madam Chairman" on Beacon Hill.

Henry Hubbell, who resides in Conway, N.H., advises that he made a firm date to attend the 50th Reunion with Walter Clifford when they attended the 40th and notwithstanding Walter's death, he will try to attend in '56. The Secretary acknowledges a post card from the Assistant Secretary dated July 17, Saybrook, Conn. Ned wrote he appreciated why so many Tech classes held their reunions at the Riverside Inn as it was most attractive.

The Secretary regrets to report the death of three classmates as follows: Alfred R. Heckman, V, on February 14, 1953, of a heart attack. The following brief notice was forwarded to the Alumni Association from our classmate Charles F. Willis: "I am wondering if the Alumni Association and the alumni magazine have any record of the death of my brother-in-law, Alfred Raymond Heckman, who died at Glen Garden, N.J., on February 14, 1953. He was a member of the Class of 1906 and took the Chemistry Course. Immediately following his graduation he went with the Groselli Chemical Company in New Jersey but some years ago had to retire from the chemical business as a result of the effects of making poisonous gases during World I. Since then, and up until his death, he lived on a farm in Garden City."

Harold C. Smith, XIII, died July 27, 1953. The following notice is taken from the *New Bedford Standard-Times* of July 29: "Harold Crocker Smith, 68, of 75 Wood Street, Somerset, a retired associate professor of the Bradford Durfee Technical Institute, died Monday night at his

home after an illness of several months. Son of the late Rev. Emelius W. Smith, rector of the Church of the Ascension for 28 years and the late Emma Louise (Crocker) Smith, he was graduated from B.M.C. Durfee High School with the class of 1902. He spent one year at M.I.T. followed by three years at the Lawrence Scientific School of Harvard University. He was later employed by the Saco-Lowell Company and worked in various textile plants of the city. For a time he was engaged in the cotton brokerage business. In 1922 he went to the Bradford Durfee Textile School as assistant instructor in that department and in 1949 was given title of associate professor."

F. Austin Tarr, II, died April 6, 1953. The class records indicate that he resided around Boston for a number of years but in 1919 moved to North Hampton, N.H., where he lived at the time of his death. In 1920 he was with the Atlantic Corporation at Portsmouth, N.H., but we have no recent data as to his business connections. He is survived by his wife. — JAMES W. KIDDER, *Secretary*, 215 Crosby Street, Arlington, 74, Mass. EDWARD B. ROWE, *Assistant Secretary*, 11 Cushing Road, Wellesley Hills, 82, Mass.

• 1907 •

On Alumni Day, June 15 last, the following men were on hand during both afternoon and evening: George Crane, Louis Freedman, Ralph Hudson, Hermann Mahr, Bryant Nichols, Don Robbins, Phil Walker; and Roy Lindsay joined us at the evening banquet.

Seymour J. Egan retired from service for the United States Navy as civilian naval architect and engineer on June 30, 1953. For 46 years he had worked for Uncle Sam, 36 of these at Boston Naval Shipyard, where for some time he was chief of civilian design, in charge of about 400 civilian employees. The *Boston Traveler* of June 30 had a cut showing Captain Pleasant D. Gold, Jr., U. S. N., commander of the Boston Yard, presenting Bill with a life pass to the Yard, and the *Boston Post* of June 28 contained quite a story about our classmate. From this article I quote: "The Egan mark has touched thousands of ships, from transports and destroyers to submarines and tugboats. He has seen, and contributed to many of the radical changes that have come about in naval construction during the last half century. Welding has replaced riveting, steel and steel alloys and aluminum have replaced wood, wireless has replaced signal flags, the involved superstructure of the old time ships has given way to simpler, cleaner lines above deck, smoke stacks are fewer, the hull forms are sleek and streamlined. . . . Much of his duties have been in modernizing, rebuilding, and converting ships. He supervised the designing of pontoons used in salvage of the submarine S-4 which went down in Cape Cod waters, and the S-51 sunk by the *City of Rome* off New York. During World War I he supervised the conversion of the *Bunker Hill* and the *Massachusetts* to the *Shawmut* and the *Aroostook* — from passenger vessels plying inland waters to seagoing mine layers. During World War II he su-

pervised the rebuilding of about 135 ships of every description. . . . Mr. Egan is a courtly, formal gentleman. He is reserved, studied, judicious, but (his workers say), charitable and generous to the nth degree, encouraging his men to study and advance, helping them often in times of sickness or financial trouble." These words very correctly describe Bill as we know him and as we have been with him frequently at class reunions and dinners. He has four children. His wife died in 1922 and his life, outside of his ships, has been devoted to his family and his church, St. Joseph's in Wakefield, Mass., where he is active in works of charity. His home is at 40 Fairmont Avenue, Wakefield.

We rejoice in the honors and success which continue to come to Clarence Howe, Minister of Trade and Commerce and Minister of Defense Production of Canada. On June 11 he received an honorary degree of doctor of engineering at Northeastern University, Boston, Mass., on the occasion of that school's 54th annual commencement exercises. On conferring the degree, President Carl S. Ell (M.I.T. 1911) made the following citation; "Engineer, executive, and statesman extraordinary, your initiative and force of character, your understanding of the meaning and use of authority have led you to high places in the government of Canada. You have distinguished yourself as a dynamic, forthright individual who makes himself the servant of the people and devotes his energies to the well-being of the state. In your important positions you have demonstrated unusual organizing ability, a talent for delegating authority, and a willingness to apply new solutions to difficult problems." This made the 11th honorary degree that Clarence has received. Of course you all know that in the Canadian election held on August 10 the Liberal government was returned to power. In the preceding campaign Clarence was the chief target for attack by the Conservatives. In his two cabinet offices he wields great power, and as the financial and political strategist of his party he is a powerful political figure.

New addresses recently received: John G. Barry, consulting mining engineer, Lopez 44-202, Mexico D. F., Mexico. — John C. Kinnear, Apartment 301, Manhattan House, 200 East 66th Street, New York 21, N.Y. — John V. Quinlan, 1100 Beacon Street, Brookline 46, Mass. — Professor Edward J. Tully, Box 379, Danville, Ill. In the social column of the Boston *Herald* of August 8 I noticed announcement of the birth of a son to Mr. and Mrs. Humphrey Buttrick Hosmer of Worcester. Mr. and Mrs. Herbert B. (Bebe) Hosmer of Concord, Mass., are grandparents.

We have to record the death of five of our classmates occurring during recent months. On April 29 Tracy Smith collapsed at the wheel of his car in New Haven, Conn., from a heart ailment and died on April 30, aged 71. Tracy received his B.A. degree at Wesleyan University in 1904 and did graduate work in Electrical Engineering at Tech, receiving his S.B. with our Class. Until 1911 he was at General Electric experimental laboratory at Schenectady, N.Y., as a pupil of Charles Steinmetz, the "electrical wiz-

ard," and then for 11 years was associated with the office of Hugh L. Thompson, consulting engineer, of Waterbury, Conn. In 1932 he joined the staff of Scovill Manufacturing Company in Waterbury, manufacturers of brass goods, becoming their chief electrical engineer. He retired in 1950 from active business life. His home address was 78 Newton Terrace, Waterbury. He is survived by his widow; a son Tracy Smith, Jr., of Fort Lauderdale, Fla.; and a daughter, Mrs. Keith Schonrock of Plainville, Conn., and five grandchildren. He was a member of the American Institute of Electrical Engineers and of Bunker Hill Congregational Church, Waterbury.

Through a letter dated May 24, 1953, from Mrs. Byron P. (Lotta C.) Luce, I learned of the death of Byron, our classmate, on May 1. He was a graduate in the Mechanical Engineering Course, soon became interested in the sugar business and during his entire life was a sugar engineer, designing and installing sugar houses in various parts of North America. I quote from Mrs. Luce's letter: "In the last 10 years we have lived in Colombia, South America, where Byron supervised the erection of three sugar factories. He had similar work in Mexico. In 1949 he was at Okeelanta factory near Belle Glade, Fla., and in February, 1950, we went to Santo Domingo, where he supervised the erection of a sugar factory for the new project established by President Trujillo. In January, 1951, this factory was christened and Byron retired from active sugar house duty and his association with Honolulu Iron Works Company of New York. We began the work of converting our house on Martha's Vineyard Island, Mass., to a all-the-year round residence. In November, 1951, Byron became ill and in August, 1952, went to the Lahey Clinic in Boston. In September we flew to California to be with our daughter and family, Mrs. Ralph E. Mott, 370 Chicago Way, San Francisco, and in January he was stricken with his last illness." Byron was never able to attend any of our class gatherings because of his duties in distant places, but he wrote me several long letters during the years. The most recent, in November, 1948, was quoted in our class notes in the January, 1949, Review.

A letter received on June 20 from Mrs. Fred W. (Beatrice) Morrill told me of the death on May 26 of our classmate, Fred, at his home, 5125 Paddock Road, Cincinnati 37, Ohio, suddenly from a heart attack. Graduating in the Course in Civil Engineering he received an appointment by the Chinese Government to teach that subject at The Imperial Pei Yang University in Tien Sien, China. In 1911 he returned to the United States, worked for three years with engineering firms in Boston, and then joined the Ferro Concrete Construction Company of Cincinnati, specialists in bridge design and construction, as a structural engineer. He remained with this company, being a director at the time of his death. He is survived by his widow and two daughters, Mrs. Freda M. Abrams, wife of Dr. Irwin Abrams, a professor at Antioch College; and Miss Marjorie Morrill of Cincinnati; also by two brothers, Arthur B. Morrill, M.I.T. '09, and Philip E. Morrill, M.I.T.

'14. Fred was a past president of the Engineering Society of Cincinnati, and a member of the American Society of Civil Engineers. He was an elder of the First United Congregational-Presbyterian Church, Avondale, Cincinnati, and in connection with his hobby of stamp collecting was past president of the Cincinnati Philatelic Americans and of the China Stamp Society, Inc.

Clinton C. Barker, Course I, one of our most quiet and unassuming classmates, and yet a most interested and loyal Tech man who rarely missed any of our reunions or dinners, went into a bank in Salem, Mass., on June 5 to make a deposit, collapsed, and before medical aid arrived, died from a heart attack. Ever since 1909 he was associated with the engineering department of Essex County, Mass., having been department head since 1942. He was a member of the Boston Society of Civil Engineers, National Society of Professional Engineers, past treasurer of the Massachusetts Society of Professional Engineers, a member of Tabernacle Congregational Church of Salem, Mass., Eastern Star, King Lodge of Masons, and the Knights of the Mystic Shrine. Clinton was married in 1917, but his wife died many years ago. They had no children, and he has lived alone at 33 Crosman Avenue, Swampscott, Mass. No close relatives survive him.

Soon after my arrival at my office at Whitin Machine Works, Whitinsville, on August 10, I was tremendously shocked to learn through the secretary of Phil Walker, at the same company, that Howard Chase had died on the preceding Saturday, August 8. Howard was general manager of Tower Iron Works, a structural steel concern of Providence, R.I., having been associated with this organization ever since 1907. His company has for years done a large amount of business with Whitin Machine Works, so that Phil Walker and Eugene Banfield (also with Whiting) and I knew him well. Phil particularly, as Whitin maintenance engineer, saw and talked with him frequently. Phil and I went to Providence on August 11 during calling hours at the funeral home and talked with Howard's daughter Barbara (Mrs. Milton Goff), and his son Howard R. Chase, Jr. We learned that Howard had gone to Wolfeboro, N.H., on August 1 for a vacation. He went swimming on August 3, became chilled, went into a coma on August 5 and died at Wolfeboro Hospital on the 8th from cerebral thrombosis. Phil Walker and Gene Banfield and I attended the funeral services on August 12 at Providence. During the last two decades Howard attended our class reunions regularly. He was a genuine gentleman of sterling character. He was a member of Providence Engineering Society and of the Church of the Transfiguration (Episcopal) in the Edgewood section of Providence, where he was superintendent of the church school. He is survived by his widow, Ethel Macdonald Chase, as well as by his children named above. The family home, 6 Aurora Street, Edgewood, R.I.

The campaign for the 1953-1954 M.I.T. Alumni Fund is now under way. By the time you are reading these notes, you will

have received from me, as your Class Agent for the Fund, a letter urging you to contribute. If you haven't already mailed your check, won't you do so now, following your custom of previous years. — BRYANT NICHOLS, *Secretary*, 23 Leland Road, Whitinsville, Mass. PHILIP B. WALKER, *Assistant Secretary*, 18 Summit Street, Whitinsville, Mass.

• 1908 •

The fourth and final dinner meeting of the Class for the 1952-1953 season was held at the Faculty Club on Thursday, May 14, at 6:00 P.M. The following were present: Bunny Ames, Jeff Beede, Bill Booth, Nick Carter, Myron Davis, Leslie Ellis, Sam Gardner, Sam Hatch, Winch Heath, Bill Hunter, Steve Lyon, Linc Mayo, Harold Osborne, and Henry Sewell. Mat Porosky had hoped to be with us but didn't make it. After the usual excellent dinner which the Faculty Club provides we discussed our 45th Reunion coming on June 12-June 14. Most of those present were planning to attend the Reunion and wanted to know who else was coming, and so on, and we were able to make arrangements for transportation to the Cape of fellows who were arriving at Boston by train.

Our 45th Reunion was held at Snow Inn, Harwich Port, Mass., on the Cape, June 12-June 14, and was a great success as those who attended will agree. We were blessed with perfect weather, perhaps on the cool side and our hosts, the Thompsons, outdid themselves in making us feel at home. The accommodations and food were perfect. I think it's the nicest place at which we have ever held a Reunion.

The following attended: Bunny Ames, George Belcher, Bill Booth, Jim Burch, Jeff Beede, Henry Blackburn, Ralph Batchelder, Nick Carter, Clarence Clark, Harry Chandler, Dick Collins, Abe Cohen, Ray Drake, Myron Davis, Leslie Ellis, George Freethy, Harold Gurney, Sam Hatch, Ted Joy, Karl Kennison, Howard Luther, Steve Lyon, George Lees, Harry Lord, Linc Mayo, Waldo Morrison, Charlton Putnam, Harry Patten, Harry Rapelye, Miles Simpson, Henry Sewell, Charlie Steese, George Schobinger, Frank Towle, Bill Taylor, Kurt Vonnegut, Joe Wattles and Harold Weeks. In addition, we were favored with several guests, Jim Burch's daughter and her husband, and Madams Belcher, Blackburn, Ellis, Freethy, Patten, Putnam, and Schobinger. By lunch time on Friday, June 12, some 15 had arrived at Snow Inn, and during the afternoon 16 more came so we had a good crowd on hand for dinner Friday night.

The Captain's House was headquarters for 1908. This is a new building just completed and located on the water's edge. Its 50-foot living room or lounge was ideal for our gatherings. In the small pantry adjoining, our entertainment committee had set up our self-service bar (compliments of the Class Treasury) which was much appreciated. The remainder of the Captain's House consisted of 10 large double rooms, each with private bath and shower, which were occupied by our Class.

George Belcher, who since his retirement has lived in Harwich, had made arrangements at nearby golf clubs for those who are still golfers, and apparently there were many matches played during our stay at Harwich Port. Less strenuous golfers had an immense golf course to play on right at our front door. There was also opportunity for sailing on Snow Inn's beautiful schooner yacht, and fishing parties were arranged — compliments of the Snow Inn management. Of course swimming was available, but the water was rather cool for us oldsters. An '08 Reunion would not be complete without a song-fest with Dick Collins at the piano and Harry Rapelye as M.C. soloist, ably assisted by George Lees. So Friday evening the singers collected in the music room at the Inn and held forth until the wee small hours. Of course all the old Tech songs were sung and the popular songs of our college days. The close harmony resulting was really something — we seem to improve with age. Harry Rapelye's singing of *Alouette* to Mrs. Thompson, Sr., brought down the house. Thanks are due Mrs. Thompson, Jr., who did so much to keep things moving. A good time was had by all and so to bed. Saturday several more of the faithful showed up. Sailing, golfing, and so on, continued with several going on sight-seeing trips on the Cape. We were able to collect most of the crowd for a group picture.

About 5:00 o'clock Saturday afternoon the Thompsons gave a cocktail party and buffet for us in the lounge at the Captain's House. The Reunion banquet was held about 7:15 P.M. We sat at small tables and no speeches were planned. All were presented with a beautiful souvenir — a silver Tech ash tray — compliments of George Lees. Following the banquet we adjourned to the Lounge at the Captain's House, where Joe Wattles showed some very fine movies, including Tech's own film, *Men of Science*.

As it was getting late by this time, most of us started for bed, but the bridge experts kept a couple of tables going well into Sunday morning. Sunday was another perfect day and the golfers got away early. After a bountiful breakfast most of us were willing to sit and gossip and say goodbye to those leaving for visits on the Cape. After dinner most of the crowd packed up and checked out. Henry Sewell had invited us all to stop off at his place in Norwell for a buffet and his famous "Fish House Punch." About a dozen of us were able to accept his invitations and partake of Mrs. Sewell's hospitality. Many thanks to Mrs. Sewell and Henry for a delightful interlude.

Monday was Alumni Day at Tech and the following attended the luncheon in Du Pont Court: Jeff Beede, Jim Burch, George Lees, Harry Lord, Steve Lyon, Linc Mayo, and Mrs. Mayo, Waldo Morrison, Harry Patten and Mrs. Patten, Harry Rapelye, George Schobinger, Henry Sewell, Charlie Steese and Frank Towle. We met for cocktails before the Alumni Banquet in rooms of George Lees and Jim Burch at the Hotel Statler, and then adjourned to the Banquet Hall where we filled two tables, in fact, we had to get extra chairs. The following were present: Art Appleton, Ralph Batchelder, Jeff

Beede, Jim Burch, Nick Carter, Abe Cohen, George Freethy, Harold Gurney, Sam Hatch, Ted Joy, George Lees, Steve Lyon, Bill McAuliffe, Linc Mayo, Maurice Meade, Waldo Morrison, Harry Patten, Harry Rapelye, Henry Sewell, Charlie Steese, Frank Towle, and Joe Wattles. The food was excellent as is usual at the Statler and the Alumni Banquet was a fitting climax to our very successful 45th Reunion.

The first dinner meeting of the Class for the 1953-1954 season will be held at the Faculty Club, 50 Memorial Drive, Cambridge, Mass., on Wednesday, November 18, 1953, at 6:00 P.M. Usual notices will be mailed but make your plans now to be with us for a good time.

We are sorry to report the death of Eleazar Myers of Leonia, N.J., on July 22, 1953, and also the death of George Everett at Chicago during the fall of 1952. — H. LESTON CARTER, *Secretary*, 14 Roslyn Road, Waban 68, Mass. LINCOLN MAYO, *Treasurer*, 47 Alton Place, Brookline 46, Mass.

• 1909 •

Forty-five years ago the Class was well started on its senior year, although it does not seem that long ago, and next June will mark the 45th anniversary of our graduation. We must, of course, have a reunion to celebrate and Jim Critchett, XIV, has already taken appropriate actions. He writes: "I am glad to be able to announce the organization of a 45th-year Reunion Committee consisting of Francis Loud, VI, of Jackson and Moreland, 699 Park Square Building, Boston, as chairman, and George Wallis and Harry Whitaker, VI, as the other members of the Committee. June, 1954, will soon be on us and the Committee will shortly be able to set the date. So let us plan to get together at that time and enjoy another chance to talk things over and learn what has happened since our 40th.

"If any of the classmates have any good ideas or suggestions to make regarding the Reunion, now is the time to get them in while the plans are forming and I know the Committee will welcome them."

Your Secretary feels that it is in his line of duty to be present at Alumni Day and he makes every attempt to attend. However, this past June Alumni Day was a week later than usual and the meeting of the American Institute of Electrical Engineers at Atlantic City was a week earlier than usual, beginning on Alumni Day. As he had already agreed to participate in the program, he and Muriel were obliged to miss Alumni Day. We asked Henry Spencer to substitute in recording those present. At the luncheon the following were present: Tom Desmond, I; Fred Perry, VI; Lawrence Shaw, V; Art Shaw, I; Henry Spencer, II; George Wallis, II. With exception of George Wallis, all of these were present at the dinner that evening and, in addition, there were George Bowers, I; Howard Congdon, I; Bradley Dewey, X; Austin Henderson, I; Francis Loud, VI; Herbert Palmer, VIII; Lyman F. Whitney, II; Johnny Willard, II.

From time to time in these notes we have chronicled the good work which J. N. Stephenson, X, has performed as

editor of *Pulp and Paper Magazine* of Canada, and as editor of a series of textbooks on the pulp and paper industry. (See the July Review.) When Steve casually accepted a casual invitation for lunch on May 15 at the Windsor Hotel in Montreal, a group of friends proceeded to spring a testimonial luncheon at which he was presented with a silver tray bearing the inscription, "Presented to J. Newell Stephenson by some of his friends in the Canadian pulp and paper industry as an expression of their esteem and to mark the 35th year of his service as editor of the Joint Textbook Committee of the paper industry, Montreal, 15th May 1953." There were several distinguished leaders of the paper industry, both of Canada and the United States, who paid tribute to Steve's accomplishments. The following is a typical quotation: "It is doubtful if anyone could be named with a wider influence on a whole generation of associates at home and abroad. Just count the individuals he has helped through the textbooks and the earlier correspondence courses. Just think of the stability he has imparted over the years through the magazine and his regular visits to mills and conventions." (A picture of Steve holding the tray appeared in the May, 1953, issue of *Pulp and Paper Magazine*.) This is not the first time that such honor has come to Steve for in 1939 he was presented with the Technical Association of the Pulp and Paper Industry (T.A.P.P.I.) medal — "In recognition of outstanding contributions to the technical development of the industry." The Class is justly proud of Steve and sends him its heartiest congratulations.

Phil Chase, VI, is vice-president of the United States National Committee which is the United States member body of the International Electrotechnical Commission. The I. E. C. sponsors international standards and definitions of electrical apparatus and terms. (Your Secretary is a U.S. technical adviser and might have gone to Opatija if his committee on the vocabulary had met there.) This year the I.E.C. meeting was held at Opatija, Yugoslavia, and Phil and Theora attended. They left on June 16 by plane to Paris and spent four days there and in Brussels and Bruges and arrived at Opatija on June 21. They found the Yugoslavs a most friendly people. They visited caves, mountains, power plants, and so on, and were entertained on a three-day boat trip down the Adriatic. Dubrovnik, a walled city built in the third century, was their destination. The August issue of *Holiday* magazine gives a good idea of their trip. Following Yugoslavia they visited Venice via Trieste, took a trip through the Dolomites by way of the Brenner Pass to Innsbruck. They also visited the skiing resort of Seefeld and Salzburg and passed through Berchtesgaden seeing the site of Hitler's "Eagle Nest" from a distance. They went from Innsbruck to Lucerne and went over the Gotthard, Furka and Grimsel Passes in Switzerland. After spending a short time in Zurich they flew to London and home via Shannon Airport, arriving on July 12.

Another classmate, Ed T. Ryerson, I, has also been recently honored. George Wallis sent a leaf from the July number

of *Men and Events* published by the Union League Club of Chicago in which a picture is shown of Ed receiving the Merit Award of the Rotary Club of Chicago "in recognition of a career of industrial leadership and devotion to the development of social welfare, religion, philanthropy, citizenship, music education and the arts to the honor of Chicago and the nation." "This distinctive award appropriately recognizes a uniquely distinguished career of meritorious service which has identified Mr. Ryerson with outstanding important activities in the Chicago community." Ed holds or has held many important offices, space permitting the citing of only a few. Recently he became chairman of the board of trustees of Chicago University; he is chairman of a citizens committee raising funds for a Chicago educational TV station. For 14 years he was chairman of the Orchestral Association of Chicago and for 23 years was a director of the Welfare Council of Metropolitan Chicago; he is a trustee of the Carnegie Endowment for International Peace. He is also a director of several corporations such as the Northern Trust Company, Quaker Oats, American Brake Shoe, New York Life Insurance and Santa Fe Railroad.

We have learned that Thomas H. Atherton, IV, was made a fellow of the American Institute of Architects for the public service that he has rendered.

Paul Lord, III, died at the New England Baptist Hospital on August 9. The obituary notices of some length appeared in several Boston papers, a tribute to the eminence which he attained in his profession. We were quite surprised for we had only recently received a clipping from from the *El Paso Times* describing a testimonial dinner which the El Paso business men had given for Paul and an associate on their retirement from the Mexican Mining Division of the American Smelting and Refining Company of which Paul was manager and with which he had been associated for over 40 years. Paul was presented with a lifetime membership in the El Paso Metals Section of the American Institute of Mining Engineers.

We also received a notice that Paul's permanent address was to be Orleans, Mass. (where Tom Critchett lives), where he planned to live in his retirement and which had been his summer residence. We wrote immediately to Mrs. Lord expressing the sympathy of the Class. She replied, "Thank you and the Class of 1909 for your most kind letter of sympathy and personal tribute to Paul. Dick Goodwin is sending a paper with Paul's activities with the company over a period of 40 years to Jim Critchett who will forward the information to you. Again my sincere appreciation of your thoughtfulness." We have not as yet received the paper, but will include later some of its content in these notes after having received it.

Paul was born in Haverhill, Mass., and prepared for the Institute at Dorchester High School. He was a member of the Mining Engineering Society; assistant business manager of the *Tech*; and a member of the *Technique* Electoral Committee. We also remember him as the captain or lieutenant of our company in the Institute brigade, and recall his ability

as an officer. He was most understanding and most popular with all of us. After leaving the Institute he was employed in mining operations in Mexico, interrupted at times by revolutions. He later became superintendent at the Santa Barbara unit of the Compania Minera Sarco in Mexico. In 1935 he moved to El Paso as assistant manager of the Mexican Mine Department and was promoted to general manager in 1946. In addition to Mrs. Lord, two daughters, Mrs. Peter Bradley of Pelham Manor, N.Y., and Mrs. Don Deane, who is living in Austria, survive him. It is needless to point out that Paul was always good natured and most popular among all of us. He particularly appealed to us Class Secretaries for his continued interest in the Class and the material which he frequently sent in for these notes. — CHESTER L. DAVES, *Secretary*, Pierce Hall, Harvard University, Cambridge 38, Mass. *Assistant Secretaries*: MAURICE R. SCHARFF, 366 Madison Avenue, New York, N. Y.; GEORGE E. WALLIS, Wenham, Mass.; HARVEY S. PARDEE, 549 West Washington Boulevard, Chicago 6, Ill.

• 1910 •

Attending the Alumni Day festivities in June were the regular standbys: Jack Babcock, Roy Briggs and wife, Bob Burnett and wife, Harry Hale and wife, Ralph Horne, Myrton Turnbull and wife, Charles Wallour, Murray Mellish, and your Secretary and his wife. All of us had a most enjoyable time.

At the time I was sending out my last notes I received the notice of Karl Fernstrom's death by telephone. Since this notice I have received many clippings and notices. I feel the following from the *Manhasset Club Life* should be passed on: "Manhasset has many outstanding men in all walks of life, among them Karl Fernstrom of Strathmore-Vanderbilt. In keeping with the rapid industrial growth of Long Island, he feels there is a need for experienced management advisors. He will devote much of his time as a consultant in production engineering and industrial management, as applied to manufacturing plant location, plants and product manufacturer including organization and operation. Mr. Fernstrom's father, Henning Fernstrom, was Swedish vice-consul at Norfolk, Va., for many years, and built or rebuilt, as chief engineer, several American railroads. He was decorated by King Oscar of Sweden for his contribution to the development of safe, fast and lower cost railroad transportation. Karl Fernstrom was born in St. Paul, Minn., and attended schools there and in Sweden. He graduated from Horace Mann School and has an S.B. degree from the Massachusetts Institute of Technology where he later taught physics and business management. He decided to spend five years in various industries to prove that there is a similarity in operations toward lowest cost for any kind of manufacturing enterprise. While an executive of the Newport News Shipbuilding and Dry Dock Corporation, he instituted the building of railway cars and repairing of locomotives. He was vice-president of the North Carolina Ship-

building Company in Wilmington and directed the building of the yard from swampland and sand dunes, then operated the yard which turned out 'Liberties' at a lower cost and in a shorter time per ship than any yard in the country. Described in a New York *Times* dispatch as 'one of the country's foremost production experts,' among other activities he has been general manager of the U. S. Rubber Office, War Production Board, vice-president in charge of production for the Cramp Shipbuilding Company in Philadelphia and vice-president in charge of production of the American Machine and Foundry Company in New York. He is now engaged in consulting and has been most recently with Foster Wheel Corporation, manufacturers of steam power plant and oil refinery equipment."

It is with sorrow that I have to announce the deaths of Carl Dudley and J. K. M. Harrison. The following are from the *Attleboro Sun* and the *Philadelphia Bulletin*: "Carl C. Dudley, 67, former general manager of the Crown Manufacturing Company at South Attleboro and a former resident of this city, died at Pawtucket Memorial Hospital after a long illness. For the past four years he made his home at Ft. Lauderdale, Fla., spending summers at Touisset Point, R. I. He was a graduate of Rindge Technical School, Cambridge, and later attended M.I.T. for three years. He was employed for several years with the Whittin Machine Works, Whitinsville, Mass. He went to work in 1916 for the Crown Manufacturing Company and remained for 29 years. He was general manager when he left. Prior to his retirement in 1949 he was for several years the general manager of the Providence Braid Company. He was a resident of Pawtucket for 35 years."

"J. Kearsley Mitchell Harrison, a retired engineer and member of an old Philadelphia family, died yesterday in New York while on a visit from his home at Warrentown, Va. He was 65. He attended St. Paul's School, Concord, N. H., and was graduated from Harvard University and the Massachusetts Institute of Technology. Mr. Harrison served as an officer in the ordnance department of the Navy during World War I. His wife, the former Agnes Helen Heath, of Boston, died in 1949."

I had a letter from Carroll Benton, an excerpt of which follows: "We held our regular monthly luncheon this week (on Monday to accommodate some of the fellows) at which the following were present: Jacoby, Potter, G. Holbrook, Hague, Schleicher, Hemmenway, Sargeant and yours truly."

Orrin Crommett, who has retired, writes from Cape Cod as follows: "Perhaps I may be excused a little bit for procrastinating for I have been doing my best to convince my folks that 'old salesmen never die' as I neared the age of compulsory retirement with the Employers Mutual Liability Insurance Company of Wisconsin. But no go. On April 1 last I had to retire on a very generous pension for life, with paid up life insurance and hospitalization and also maximum Social Security on top of that. So now all I have got to do is to keep Mrs. Crommett and myself well. We have recently sold our

home in Needham and have nearly completed remodelling old 'Square Top' here in South Orleans and have moved down here for good. I am really enjoying life with my gardens, a little golf and striped bass fishing."

I have also had a letter from Cliff Hield who writes: "I am now a country squire, and between digging a new well, painting screens and getting them on, and hoping that tornadoes do not hit my five acres and take down my maples, my spare time is well occupied. I live at Crystal Bay, Minn., on the lovely Lake of Minnetonka, famed in song and story." — HERBERT S. CLEVERDON, *Secretary*, 120 Tremont Street, Boston, Mass.

• 1911 •

You simply had to be there to realize the quiet, effective success and enjoyment of the informal get-together we had at Snow Inn, Harwich Port on Cape Cod, the third weekend in June. There were 17 '11 men, 15 wives, two children and three guests — a total of 37 present. Of course, that's only about a third of the number we have at a regular five-year reunion, but we certainly had a fine time — all of us. Tom and Mildred Haines were the trail blazers, arriving Wednesday afternoon (Bunker Hill Day), while on Thursday, the 18th, Charlie and Elinor McManus checked in. Early Friday afternoon two old Framingham High School grads and their wives — Roy and Ina MacPherson of Framingham and Dennie and Sara Denison of Gardner — arrived, closely followed by Ed and Geneva Stimpson. Pretty soon a party of four drove in from the Motor City (Detroit) — architect Joe French, his wife, Yolanda, their daughter, Yolanda E., and her friend, Janet Walter. After George Cumings, Winchester, Mass., bachelor, got there, our Class President drove in — Don and Lois, accompanied by their niece, Pamela Stevens.

Arriving within minutes of each other were cars from Westchester County and Metropolitan Boston, containing Harry and Grace Tisdale, and Obie and Alma Clark, respectively. Walter Welch and his bride, Helen, arrived just before dinner from New York and then the Canadian delegates — Paul and Doris Kellogg — presented their credentials and we were all ready for dinner. There was, of course, no formal program and we had some fine group parties for reminiscing; some played cards and most of us retired fairly early on Friday evening.

Saturday was another fine day, with a rather cooling breeze in contrast to the very warm weather reported inland. Five of us had an informal putting contest in the morning, and at the end of 36 holes George Cumings and Dennie were exactly tied at 81, followed by Tom Haines, Harry Tisdale and President Don. In a nine-hole playoff, George beat Dennie by a single stroke. Leroy and Marjorie Fitzherbert arrived from Boston in mid-morning and shortly thereafter O. W. and Gertrude Stewart blew in from nearby Kingston.

After an unusually fine luncheon, Frank Thompson took about 20 of us out in "the duck" — an amphibious tank — for a cruise

and it was real fun. Frank and Eleanor Thompson and Mme. Thompson, always the gracious hosts, arranged a cocktail party for us at the beach house before dinner on Saturday and just before that time, Gordon and Eloise Wilkes joined us along with W. Henry Martin '07 of Washington, D. C., who graduated with us and has always been most friendly with us.

At the cocktail party we sang Tech songs (guess who at the piano) and Dennie read messages — telephone, telegraph and by letter — from disappointed classmates unable to attend. John and Bert Scoville telegraphed: "Sorry not to be with you. Our best wishes to all for a fine time. See you in '56 or sooner." From Potrerillos, Chile, S. A., Frank Osborn cabled: "Greetings and best wishes to all. Worst storm century struck Atentament Province. Railroad and highways badly washed. Viva Technology."

Jim Campbell phoned from New York to express deep regrets that he and Toni had to forego attendance, due to the fact that Jim had had a successful cataract operation last month and had only recently obtained new glasses and was hardly used to them yet. Otto Schurig wired from Schenectady: "Emergency prevents our attending reunion. Best wishes to the others." Syd Alling, VI, had written President Don in late May saying that he and Marion had just returned from a six-week auto trip to California "and will now have to stay home for a while." They sent their best to all present and said they had such a good time at Snow Inn in 1951 that they hated to have to miss this one. Minot Dennett had written a week earlier to Don from Detroit that he found at last that "it does not presently seem wise for me to try to get away" and wanted to be remembered to all present. Similarly, Bill Orchard, president of Wallace & Tiernan Process Company, Belleville, N. J., expressed regrets for himself and wife, as did Zim Zimmerman, who had hoped to make his summer trek to nearby North Chatham, on Cape Cod, early enough to "drop in" at Snow Inn, but it didn't materialize. In answer to a letter, he also wrote: "While the life of ease has not yet set in, at least some of the pressure is off, and that part is all to the good. I am finishing some hangover 'USC' jobs and have accepted membership on another Board of Directors, so that I must still keep track of developments in the field of technology."

On Saturday evening we had an informal get-together and musical entertainment, Henry Martin having brought along his mandolin and some singable songs for group singing — also Don Stevens gave us two or three fine monologues and Dennie entertained from the piano — it was all lots of fun. Then on Sunday morning, the charming Joanne Harrington and Mrs. Charles Howes, whom she was visiting at Chatham, came for dinner with her parents, Joe and Rose, to complete our party of 37. Joe, by the way, was busy a great deal of the time painting sea- and landscapes and he made some mighty fine watercolors. About noontime Frank Thompson took a party of us — 23 in all — out for a most enjoyable sail on his fine schooner, and this was truly one of the high spots of the get-together. Sunday

dinner marked the official close of the highly enjoyable event.

One of the real hits of the program at the Thompson's wonderful cocktail party was the reading of a fine letter from Jim Duffy to Obeedee, in which he expressed regret at being unable to attend due to a European trip he was then on. Jim wrote, as only he can, of an episode behind the Iron Curtain (in the Russian zone of Austria), that really had us all in stitches. Briefly, Jim said he had been subscribing for a couple of years to *Intelligence Digest*, which publishes underground reports from all over the world. The editor, an Englishman, calls the shots pretty well, and the pamphlet is pocket-size. He had been carrying a copy of it in his unlocked camera bag and reading snatches now and then. About five minutes after the border sentries had passed him, Jim happened to think of the magazine in his camera bag — an issue which foretold of Stalin's death, saying he was alive at the time but his condition was deteriorating rapidly. If they found the magazine, he was afraid his freedom in Vienna might be seriously restricted, and there were two men in his compartment, so if he tried to throw it out the window they might pull the emergency cord and he would be taken for a courier for the underground. So, he took it out leisurely for 10 or 15 minutes, then casually put it in an inner pocket of his coat and sauntered to the men's room, where he rolled up page by page and dropped the little pellets through the flush-toilet and, Jim concluded: "I have come from that little room many times in my life, but never with a feeling of greater relief!"

We had 15 classmates and two wives at Alumni Day at M.I.T. and Hotel Statler, Boston, on Monday, June 15. Attending both the luncheon in the Great Court and the Banquet at the Statler were Bill Coburn, George Cumings, Dennie Denison, Fred Harrington, Jack Herlihy, Leonard Mills and Emmons Whitcomb. John Alter and O. W. Stewart had their wives with them at the luncheon, with Cal Eldred, Tom Haines, Roger Loud, Morris Omansky and Al Wilson also at the luncheon, and Henry Dolliver at the dinner only. Bill Coburn told us of the fine progress he is making at his Blue Chip Farm — a stock farm at Hampton Falls, N. H., where he has two breeding stallions, a gelding and 12 mares. He has promised a more detailed report on the project for a later issue of class notes.

We are indeed sorry to report the death of another classmate — Davis H. Tuck, VI, for many years chief electrical engineer with Holophane Company, a New York City company specializing in illumination service, passed away at his home in Redding Ridge, Conn., July 5. Born at Nashville, Tennessee, Dave prepared at Montgomery Bell Academy and the DeMerritte School and while with us was an active member of the Southern Club, as well as the Electrical Engineering Society and the American Institute of Electrical Engineers. After graduation, Dave spent four years with the Bureau of Standards in Washington, D. C., in the photometric laboratory and while there originated the "Multivoltage Technique of Standardizing Tungsten Filament Lamps Against the

Primary Carbon Lamp Standards." He joined Holophane in 1917; was a director of the company and until 1951 its chief electrical engineer. For the past two years he has been active on a consultant basis, being chiefly interested in the improvement of industrial lighting equipment and plant lighting designs. In a letter, Company President Charles Franck said: "Selflessly devoted to the best interests of Holophane, Tuck was held in affectionate esteem by the officers, directors and employees of the company and the large number of our customers he served during his many years' service. Possessed of a warm personality, he leaves his indelible mark upon those whose lives he touched and who will ever hold him in grateful remembrance." A fine tribute to a fine classmate.

Another junior '11 man enters the social spotlight: "Mr. and Mrs. Robert Emory Morse announce the marriage of their daughter, Margaret, to Mr. John Putnam Brodsky, Saturday, the 27th of June, in Calvary Episcopal Church, Summit, N. J." May you live long and prosper, kids — we enjoyed your being with us for a part of our 40th at Snow Inn two years ago!

Once again 1911 made a satisfactory showing in the 12th Alumni Fund, which closed in August — we had \$2,711 from 107 contributors — a gain of 10 subscribers and \$207 over the preceding year. Our average contribution of \$25.34 compares favorably with the overall average of \$22.12, but the six classes who were at M.I.T. while we were there (1908-10 and 1912-14) showed an average of 97 subscribers, giving an average of \$29.31, so we still have a chance to improve 1911's position in the new fund drive now under way. As expected, the Boston, New York and New Jersey areas led in number of subscribers, for the class population is densest in those two regions. There were 29 from Metropolitan Boston, 12 from the rest of New England, 27 from New York and New Jersey, 13 from the balance of the Atlantic Coast, 17 from the middle west, six from the southwest and west and three from territories and foreign.

Chief engineer of its Gas Department from 1937 until his appointment as consulting engineer in January, 1952, William J. Pead, Jr., VI, retired on pension from the Quebec Hydro-Electric Commission at the end of February, we have learned. A former president of the Canadian Gas Association, Bill has been associated since 1922 with Hydro-Quebec and its predecessors, the Montreal Light, Heat and Power Cons. Born at Dracut, Mass., Bill served with the New York Central Railroad and the Lowell (Mass.) Gas Light Company before joining M. L. H. and P. as a gas plant superintendent. Brief intervals in the Industrial Department preceded permanent attachment to the Gas Department as its chief engineer. Hope you'll be very happy in your retirement, Bill, and let's hope it gets you back into the habit of attending our reunions, as you did before going so far away.

Harry Tisdale, sent a clipping from the White Plains *Recorder-Dispatch* of August 28, announcing the election of our four-star General George Kenney, I, as president of the Air Force Association. Congratulations, George — and speaking

of presidencies, Sara and I attended the annual meeting of the New England Association of Commercial Executives at The Marshall House, York Harbor, Me., in mid-June and I was honored with election as president for 1953-54. From there I went to M.I.T. as the guest of the Class of 1928 at its Silver Anniversary Reunion — a fine Class, by the way, which made me an honorary member five years ago (1928 being the year I retired as Alumni Secretary).

Paul and Ottillie Cushman of Oklahoma City drove over a 150-foot span of bridge near Norman Falls, Okla., just a few hours before it collapsed into the Canadian River, fortunately with no loss of life, according to clippings sent to me by Ottillie. She also included a copy of *Metals Review* containing an account of a memorial night for our late classmate, Marcus Grossmann, III, held annually by the Mahoning Valley Chapter, Society for Metals. Congratulations are also due Paul for being elected president of the Sooner State's "Buckaroo Square Dance Club!" Had a card from Walter and Grace Welch in mid-August from Montmorency Falls, P. Q., Canada, where they were taking a vacation trip.

John Taylor Arms, IV, one of America's most famous etchers, who is equally skilled in flower arranging, gave a lecture at the New Ocean House, Swampscott, Mass., in mid-July. Another M.I.T. noted artist, Samuel Chamberlain '18, recently paid this tribute in an issue of *Print* to our classmate: "Arms is a phenomenon, the most extraordinary man that many people, hundreds of people, have ever met. I say this with confidence after observing the audiences at many of his lectures. His subject might have been the demonstration of an etching process, or a discussion of flower arrangements. In each the audience was utterly spellbound. Decidedly, John Arms is an exception among etchers. . . . The spiritual quality which underlines his etchings springs from the affection which he feels for his fellowman as well as for his own work." Earlier, in late May, another '11 man, Frank Smith, III, metallurgist at the American Brass Company, Waterbury, Conn., was a speaker at the seventh annual convention of the American Society for Quality Control in Philadelphia. Frank's topic was "Statistical Quality Control at the American Brass Company."

At this year's 52nd annual commencement exercises of Northeastern University in Boston, President Carl Ell, XI, awarded among others a Litt.D. on our old friend, Clarence D. Howe '09, Minister of Trade and Commerce in Canada. The main speaker, Robert Sprague '23, who heads the Sprague Electric Company, North Adams, and currently also heads the Associated Industries of Massachusetts, praised Northeastern's co-operative system by which a student works 10 weeks and attends college for 10 weeks, saying: "I believe strongly in the doctrines and methods of Northeastern and I also am keenly aware of the steadfastness of purpose shown by all of you who are graduating here today." In mid-summer I had a post card from Carl and Etta from Copenhagen, Denmark, showing Kronberg Castle, immortalized by Shakespeare

as the scene of *Hamlet*, saying: "Greetings from Copenhagen, the Hamlet, Prince of Denmark, Country. We are here for a week, then on to Sweden and Norway. Best wishes to you for the summer."

R. W. Cushing, 606 Rolling Road, Chevy Chase 15, Md., writes: "I note you list me in the class roster as 'retired,' but I have not quite reached that position. I will let you know 'when' and I hope then to be able to attend some of the class reunions." George Cumings and Harry Tisdale both sent me some fine get-together snapshots and in an accompanying note, George said: "Words are inadequate for me to express the grand good time I had on our informal reunion. Now I have a little idea of what you must have had on our 40th with the whole gang there. 1911 — what a class — 1911!" Harry wrote: "After Snow Inn, Grace and I spent the next week end with friends at Bass River and returned on June 29. Joe and Rose Harrington are up in Maine for early August. Rose says Joe is painting 'like mad.'"

There was a good picture of our Assistant Class Secretary, John Herlihy, vice-president of the Boston Edison Company, with employee leaders at the Employees' Club annual outing at the Riverside Recreation Grounds, June 27, in the Boston *Sunday Herald* the next day. The Aleck Yereances have moved from Wellesley to 50 Follen Street, Cambridge 38, Mass., and in collecting things for the moving Aleck came across an old post card he had sent his mother back in 1909, showing "The Beauty Trio" from the Tech Show of that year, "That Pill Grimm," in which Aleck and I had been chorus girls. Here are some address changes from the Register of Former Students: Austin W. Brooks, VI, Skyland, N. C. (formerly Cristobal, C. Z.); D. P. Gaillard, VI, 224 Transportation Building, Washington 6, D. C.; Merton W. Hopkins, I, 106 Mathews Street, Stamford, Conn.; William J. Orchard, 546 Ridgewood Road, Maplewood, N. J.; Mrs. Robert Spencer, IV, Route #9, Box 984, Tucson, Ariz.; Rufus E. Zimmerman, 177 Highland Avenue, Short Hills, N. J. — ORVILLE B. DENISON, Chamber of Commerce, Gardner, Mass. JOHN A. HERLIHY, 588 Riverside Avenue, Medford 55, Mass.

• 1912 •

Our gourmet classmates, Bolmer and Gladys Vaughan continue to regale us with news of their travels and gastronomic feats. From Chateauf-neuf-du-Pape, "We thought of you again today when we added another page to our gustatory exploits as we fairly swooned when our taste buds got operating at lunch at (of all places) La Mule du Pape (The Mule of the Pope), washed down with the famous red wine of the district and (a rarity) some white they make here. Put it in the book for the boys to stop off here for lunch and see if they don't give it XXXX. We were sad to leave Italy after three months of wonderful sight-seeing but Provence is a great place to start France with. We are now off to the Hotel Roblin, Paris, for a month." From Paris: "Here we are in the final round with the liqueurs we bought here, sent to the ship

(when are you going to stop by and sample them?), the final shopping to be done in haste and then the hectic orgy of packing; fortunately the boat-train does not leave till about 10:00 A.M. and we are close to St. Lazare. Coming up from Avignon we had one of those great gustatory experiences which comes generally only once in a lifetime (we fortunately have had two, as we dined at Foyot's before the war), stopping off at Vienne and having lunch at Ferdinand Pont's Pyramid: such service, such food! Wished you had been along because you cannot describe it. Well, the good old *Liberté* will be bringing us into New York. July 22 not far off. Hope we shall meet soon."

The following 1912 men were present on Alumni Day last June. Andrew F. Allen, James A. Cook, Albion R. Davis, Jerome C. Hunsaker, Charles C. Jones, Nicholas T. McNeil, Wallace J. Murray, Erwin H. Schell, Frederick J. Shepard, Jr., Cyrus F. Springall, Robert C. Stobert.

We record with sorrow the sudden passing of Aksel Pedersen on June 12. He seemed quite well when Harold and Helen Manning called on the Pedersens in April as was also the case when the Whites called upon them in February. He was taking things easy and was looking forward to attending the Reunion in 1954.

We also regret to report the deaths of Kenyon Pruyn on March 2, Frank H. Curtis on March 6, and Elliot W. Tarr on March 27, but we have no details. — FREDERICK J. SHEPARD, JR., *Secretary*, 31 Chestnut Street, Boston 8, Mass. *Assistant Secretaries*: LESTER M. WHITE, 4520 Lewiston Road, Niagara Falls, N. Y.; RAYMOND E. WILSON, 8 Ogden Avenue, Swarthmore, Pa.

• 1913 •

Our Alumni Association, from its studies on the mores of class reunions, picks the 40th to surpass all others. Henry Worsham Dew, Jr., III, was born and raised in Virginia. He joined our Class at Tech, after having spent two years at Washington and Lee University, at Lexington, Va., where he is class secretary and an active worker for the Alumni Fund. He had never attended a 1913 Reunion. I submit "suh" that Henry is a scholar, a gentleman, and a competent judge of the good things in life. I ran into him at the cocktail party, preceding the alumni banquet at the Statler. Now Henry is a very popular man at a party, but he took ample time out to say how much he had enjoyed the three days at Oyster Harbors; and that went, too, for Sarah, his wife, one of the sweetest Texas (and Wellesley) gals you'll find. Henry looked at me straight from his sparkling blue eyes to vow that he and Sarah will never miss another 1913 Reunion. I was not at all surprised at this declaration, for certainly the success of our 40th Reunion exceeded expectations.

The setting couldn't be improved on: the spacious hotel, and grounds, were designed for the purposes of a large private club, whose members and families occupy it during the regular summer season. The house and grounds keeping are top-notch. The management and personnel are competent and friendly, and know

from long experience exactly how to cater to a reunion group. The weather was mostly sunny, and cool enough at times to make it very cozy for groups which gathered around the several fire places. Over the years, Bill Mattson and his practically autonomous committee have acquired savy in the art of luring attendants, and sending them off feeling so glad that they had come. Bill, et al, more of whom follows, came up this time with an unobtrusive program which carried things along as smooth as glass. Oyster Harbors turned out to be the adequate setting required to make this party outstanding. Most of our 64 classmates, with 40 wives, had registered on Friday, before lunch, where Bill Mattson made some brief but pertinent program and "who's who" announcements. Golf and putting went on during the afternoon, along with much getting acquainted.

Dinner was informal, with a high noise level from laughter and conversation. Most everybody stayed either to engage in, or watch the scheduled square dancing, squired by Al Brown, II, who is really a "pro" at this group sport. Al supplies the music on his accordion, and is thereby able to set a tempo well within the endurance of the participants. His persuasive manner, and clear explanation of the simple maneuvers attempted, enticed some 30 persons to pitch in, and everybody had a good time, including folks on the side lines. Then Al Brown sat down at the piano, while Rebecca Davis led singing and round dancing; and on top of all this, several groups drifted to parties, here and there upstairs; very successful, I heard, and repeated on following nights. Saturday was given to reminiscing or visiting in groups indoors and out, auto and boat trips, bathing in the salt water inlet by hardy folks like Charlie and Hester Thompson, and Bob Weeks, also more golf and putting. At five o'clock, Bill Brewster, Joe Cohen and Bill Ready were hosts at the 1913 cocktail party. This proved to be a highly audible affair of linked refreshments and good fellowship, long drawn out. (The "linked . . . , long drawn out" is taken from a favorite poet of Arlo Bates.) So, the Class Banquet started late. After an excellent roast beef dinner, in the completely filled dining room, toastmaster Bill Mattson called successively on Bill Ready, Al Townsend, and Larry Hart. As one might suspect from his success in business, and the raising of a fine family, Bill Ready has well rounded gifts, above average. He thanked in turn those who had worked hard for this reunion, mixing praise with humor, to suit the personality of the individual concerned. One grand guy is our Class President! To close he presented Bill Mattson with an impressive looking "Mighty Midget" world-wide short wave radio, made by the National Company, of Malden, Mass.

Al Townsend read the letter (which follows) from our honorary classmate, Sammy Prescott, '94: "Deprived by many exacting obligations and infirmities, I cannot join in the pleasurable events of this auspicious occasion when you celebrate the 40th anniversary of your graduation from our M.I.T. As your oldest and orneriest member, let me send saluta-

tions, felicitations, and these simple lines of regret.

"You wouldn't think 't would be much fun to pass the age of 81,
With thin white hair and vision poor,
and hearing not like days of yore,
And feel that as your muscles fail,
you have to travel like a snail.
But when I think of friends like you,
and all the other friends I've had,
Who through the years were staunch and true,

It's not so bad! It's not so bad!
It makes me rather sad to know that I must miss the '13 show.

It would be fine if I were going
to celebrate with old Joe Cohen;
I'd like to see that Plymouth rooster
who bears the good old name of Brewster,

With Townsend, Hart, and both the Sages,
and Mattson, Hurst, and many others,
I'd have the jolliest night for ages
among my scores of '13 brothers.

I'd like to be with you again and drink a toast to all the men

And ladies, too — the Class today,
now 40 years upon its way.

Let Joe MacKinnon call the roll,
and Murdock pass the foaming bowl!

I can't remember every name,
but to each man I *ought* to know

I send my greetings just the same,
and wish you luck where'er you go.

Thirteen! I lift a glass to you
and pledge allegiance strong and true.

Of course you couldn't ask for more
than *second* place to '94, a class now fading, thin and old,

but every member solid gold!
You will be here and going great
when '94 is off the scene,

But when *you* reach the golden gate,
Saint Pete and I will greet '13."

The Class Secretary was honored to introduce two very attractive young ladies, in the persons of class daughter, Neva, 2d, and class granddaughter, Neva, 3d. Following were presentations of various sports prizes and reunion souvenirs. Larry Hart is vice-president of Johns-Manville Company, in charge of personnel. He has the responsibility for the well-being of 22,000 employees, pretty well spread over this country. All of this is by way of explaining that Larry is well equipped to entertain us, as he did, with humorous stories from his large collection. So to bed and early breakfast, or to the late parties mentioned above.

The program for Sunday suggested "church and relaxation," and that was the order of the morning following assembly for the class picture which appears on page 32. Relaxation carried on in interval between lunch and the Cape Cod clambake, interrupted briefly for a class meeting, Bill Ready presiding. It was voted to hold an informal reunion at Oyster Harbors, in June, 1956, that year being, as Paul Cogan pointed out, the one in which most of us would reach the common retirement age, of 65 years; also to hold our 45th Reunion at Oyster Harbors. Larry Hart solicited an additional contribution to the Alumni Fund as an extra on the occasion of our 40th year celebration; and Phil Capen was elected Assistant Class Secretary. Only a good soldier

like Phil would have accepted this job.

The "bake" was made by a qualified "bake master" on the grounds just outside of the large cocktail room, where it was served. I have eaten clambakes at the Squantum Club, in East Providence, and at Rudolph Haffenreffer's, on Mount Hope Bay. (Rudolph is Class of 1895, and the donor of his Narragansett Ale at Tech Alumni Banquets). From experience I could venture an appraisal here, but since I sat next to Nate and Naïome Poor, I yield to the opinion of these bake addicts from way back, who graded it "a good bake," high praise indeed from Yankees.

For Sunday evening the program read "as you wish" and that's the way it was, to end the doings at Oyster Harbors. All hail and thanks to our Reunion Committees! Men: Achard, Brewster, C. W. Brown, Cameron, Capen, Carlson, Cohen, Crocker, Eichorn, Gustin, Howie, MacKinnon, Mattson, Rand, Ready, Russell and Wood. Ladies: Mesdames Achard, Capen, Mattson, Ready and Hester Thompson. Headed by that past master of extracurricular affairs, Bill Mattson, this group worked together for some 10 months, on the infinitely painstaking deliberations, which are necessary to ensure success. Members of the ladies' committee, following the leadership of Mabel Mattson and daughter Janet, pitched in at Oyster Harbors to welcome and break the ice for new arrivals so successfully as to establish very early, the general use of first names.

Items and personalities: In sports Aryllyle Cogan and Henry Dew were tied for golf honors, and Hester Thompson was the best putter; Harold Crawford traveled the longest distance to attend (from Walla Walla, Wash.) No male wardrobe remotely approached, in vividness and variety, that of Bob Bonney. Consider the Tyrolean outfit in which he cavorted at square dancing: shorts length flannel pants supported by matching cloth braces, revealed knobfree knees above long woolen stocking, and here words fail. Bob wore a succession of sport coats and Tattersall vests the like of which can only be seen pictured in *Gentry and Town and Country*. Bob has been raising pedigree beef critters for some years on his farm in Maryland, a no fly-by-night hobby, which he intends to carry on there after he retires. Pipe smoker Bill Brewster was distinguished on two counts: he was, one, the youngest man present, and two, has the greatest number of grandchildren. The Brewster station wagon bore Massachusetts license plates, number 1620. Bill gave me a withering look when I obviously failed to recognize this "Mayflower" number. A large round table occupied the center spot in the dining room, and starting on Friday morning it was appropriated by a bunch of earlier rising stags, to wit: Townsend, Russell, Haynes, MacDonald, Muther, Bylund and Murdock among others.

Townsend and Russell treated us to some choice stories; for the telling of which both have a flair. Walt Muther, at this table and elsewhere, sustained his reputation as our party lion. His story, true, of how he and a fraternity brother celebrated the observance of a Tech holiday in June, 1913, I shall never forget.

The holiday was to honor a former president of the Institute, and Walt wishing to allay all fears as to the outcome of his recent final examinations, decided to celebrate the occasion. So he conducted his pal on a tour of midtown Boston, starting at Hotel Lenox and ending at Charlie Worth's, with intervening stops at the Touraine, Parker House, Hotel Lenox and the Adams House. At the successive stops toasts were offered to achieve the object in view, which, finally, proved to be sublime. Walt is presently employed in a business which processes carbon paper to make multiple interleaf carbon copy forms, in all dimensions and multiplicities. Walt Bylund lives in New York, and works on Army ordnance problems. His dignified mien conceals considerable pithy mischief. Tom Byrne had a heart attack two years ago, and was getting around very well, with the use of a cane. Tom told some details of his illness. He has made a remarkable recovery due entirely to self denial and inherent fortitude.

Andy Vogel has recently retired from International General Electric, where his work was largely on building construction and maintenance, in the tropics. Presently he is studying meteorological data, to guide him in the selection of a place in the sun to retire. His statistics indicate the Carolinas, somewhere between Chapel Hill and Aiken. Lester Gustin is collecting material for his second genealogy of the Gustin family, this one calling for digging deeper into musty archives. I enjoyed a nice visit with Ken Scott, the first in 40 years. He has the appearance of a "man of distinction," and says modestly that he is a "dilettante engineer." He spent many years in Great Lakes shipping and grain trading, at both of which, I gather, he was astute. He now looks over his business interests in the intervals between fishing, mostly bass, in Wisconsin, from May to October, and quail shooting between June and September. He shoots in Alabama on 6,000 acres of leased land, on which he has to feed the birds, since the original small farmers have now almost entirely removed to Birmingham and other cities.

As an admirer of Ed Cameron's lucid and lively style of writing on technical subjects, I was not surprised to learn that he has been commissioned by the Slater family to visit England to get material there for a history which he is to write. The Slater Mill was the first successful "cotton factory" to be established in this country. The original Slater Mill, now standing in Pawtucket, R.I., has been restored, as a museum, which contains some of the machinery with which it was started. Several of our men expressed the opinion that our party was a bargain at the price, and volunteered to underwrite any deficit. Bill Mattson, in July, after the books had been closed, reported gleefully, no deficit but instead a small addition to the class treasury.

We had 36 men at the alumni banquet on Monday. Crost, Flanders, Gentner, Glancy and Terry joined 31 men, up from the Cape. Roster at Oyster Harbors Club: Francis and Florence Achard, VI, Jim Beale, XI, Clarence and Milly Berry, VI, Bob and Imogene Bonney, X, Harry Braude, X, Emerson Bray, VI, Clarence and Ruth Brett, I, Allen and Maurine

Brewer, III, Ellis and Allen Brewster, II, Laurence and Emma Brown, II, Charlie and Helen Brown, XIV, Walter Bylund, II, Tom Byrne, IV, Ed Cameron, I, Phil and Rosalind Capen, X, Hildy and Ethel Carlson, VI, Si Champlin, V, Paul and Aryllyle Cogan, II, Joe and Rose Cohen, X, Harold and Mary Crawford, IV, Howard and Evelyn Currier, II, Burt and Florence Cushing, II, Stan and Rebecca Davis, VI, Henry and Sarah Dew, III, Bill and Dorothy Eichorn, XI, Stuart and Ellen Eynon, VI, Jack and Jeanne Farwell, II, Warren and Virginia Gotherman, VI, Lester Gustin I, Morris Hall, XI, Larry and Arry Hart, XI, Pete Haynes, I, Fred and Clara Hersom, VI, Gordon and Ethel Howie, I, Ed and Harriet Hurst, II, Fred Lane, X, Gene Macdonald, I, Joe and Helen MacKinnon, VI, Bill and Mabel Mattson, I, and daughter Janet, Fred Murdock, I, Walt Muther, I, Gil and Florette Pardey, VI, Byon and Phebe Pierce, X, Nate and Naomi Poor, X, Harold and Esther Rand, I, Bill and Neva Ready, VI, Ken and Ada Reed, II, Geff and Marge Rollason, X, Jim Russell, II, Nat, I, and Charlotte, IV, Sage, Ken Scott, I, Herbert and Leila Shaw, II, Dave and Della Stern, V, Charlie and Hester Thompson, X, Al Townsend, II, Charlie Trull, VI, Bob Tullar, II, Andy Vogel, IV, Paul Warner, IV, Max and Bertha Waterman, II, Bob and Dorothea Weeks, VI, Percy and Gladys Whitman, III, Charlie and Elizabeth Wood, I. — FREDERICK D. MURDOCK, *Secretary*, Box 788, Pawtucket, R.I. GEORGE P. CAPEN, *Assistant Secretary*, 18 Greenwood Avenue, Stoughton, Mass.

• 1914 •

Commencement time at Technology always affords a pleasant occasion for old friends to get together. This year was no exception. In addition to those events run by the Alumni Association, the Class had its regular afternoon meeting at the Engineers Club in Boston on June 15. Although preliminary plans for our 40th Reunion next summer were discussed, no other serious business was transacted. Your Secretary noted the following Fourteen men at one or more of the commencement events: Atwood, Busby, Charm, Corney, Crocker, Derry, DesGranges, Fales, Hamilton, Mayo, Morrill, Morrison, Peaslee, Stanyan, Storke, Trufant, Harold Wilkins.

Vernon Tallman had signed up, but because of the death of one of the executives of an operating utility with which he is associated, Vernon had to be absent from Boston at commencement time. Charlie Fiske, who usually comes from New York for this occasion, had to remain there, as he was in the midst of a G.M.A.C. financing program which the papers reported as amounting to the sum of 315 million dollars.

Mrs. Roy V. Hart (Marion Rice of undergraduate days) is again making the news headlines. She took off on August 25 from Massachusetts in a Beech Bonanza for an around-the-world flight via Europe, Africa, Asia, and Australia. She was accompanied only by a former airline captain as a co-pilot-navigator. It will be recalled that some years ago Mrs. Hart attracted international attention when she

skipped a 90-foot ketch on a three-year, 30,000-mile trip around the world. She is the author of two books, *Who Called That Lady a Skipper?* and *I Fly as I Please*.

On June 25 Gardner Derry was awarded The Order of Merit, the highest honor granted to Westinghouse employees. Derry joined the B. F. Sturtevant Company of Boston immediately after graduation and later became a vice-president. When Westinghouse acquired the Company in 1945, he continued as division manager. The citation of the award is as follows: "His untiring energy and effective guidance in the complex task of merging the Sturtevant organization with Westinghouse; for his broad knowledge of the problems and products of the Division and his effective application of that knowledge in advancing its position in the industry; and for his important contributions to the attainment of desired commercial objectives."

Jim Reber has returned to Auburn, N. Y., from New Orleans, where he has completed a new plant for a subsidiary of the Columbian Rope Company. The work included the installation of 80 carloads of machinery. Professor Harry L. Bowman, who for many years has been Head of the Department of Civil Engineering at Drexel Institute of Technology in Philadelphia, has been named to both the posts of Dean of the Faculty and Dean of Engineering of that institution.

Retirements are now beginning to be more frequently mentioned in our class notes. Word has just been received that Howard Willis, Manager of the H. P. Hood Company, ice cream division for the Lawrence-Lowell, Mass., area, has settled into a more leisurely role in life. Willis lives in Salem, N. H., where he has been very active in civic affairs. He has served for many years on the School Board, including its chairmanship, four years as a selectman, and for the past seven years has been town moderator.

Frank Ahern's son, who has been studying in Austria, has returned to Washington, D. C., where he is working with an architectural firm. He studied at the Technische Hochschule at Graz receiving a doctorate in technical sciences—the first American to receive such a degree.

A note from Ross Dickson tells that George Whitwell addressed a large group of delegates at the American Gas Association Convention in New York on the subject of "The Importance of the Human Element in Production Programs." Ross also wrote that he is very pleased with the class showing in the past year's Alumni Fund.

As a final item to these notes, there follows a quotation from a letter from Roy Parsell: "We are keeping Pine Orchard in good shape for the Reunion next June. I presume at the proper time you will start the ballyhoo going so that we'll be assured of a large turnout." That is correct, Roy. The first release will go out just about the time these notes are in your hands. Charlie Fiske has real plans for our 40th! — H. B. RICHMOND, *Secretary*, 275 Massachusetts Avenue, Cambridge 39, Mass. ROSS H. DICKSON, *Assistant Secretary*, 126 Morristown Road, Elizabeth, N. J.

• 1915 •

Hello, everybody! Welcome back to our column of notes with hopes that you have all enjoyed a pleasant and happy summer with your families and that business is profitable and successful for you all.

Alumni Day, June 15, was as gay and successful as ever with these '15 men attending, and joining at the now familiar Stein-on-the-Table Dinner: Larry Bailey, Evers Burtner, Bill Brackett, Bridge Caselman, Jerry Coldwell, Sam Eisenberg, Vick Enebuske, Fannie Freeman, Gabe Hilton, Larry Landers, Azel Mack, Archie Morrison, Pete Munn, Ben Neal, Wally Pike, Pirate Rooney, Al Sampson, Frank Scully, Henry Sheils, Speed Swift, William Tallman, Easty Weaver, Carl Wood, Max Woythaler. There probably were other wives in attendance during the day but the ones I saw were Tess Hilton, Mary Scully, Katherine Woythaler, Mrs. Caselman, and my own Frances. Easty Weaver, as a brave bachelor, took Tess, Katherine, and Fran to dinner while the rest of us were at the Alumni Dinner. Later a number of us repaired to the Hilton's suite in the Statler for a fond farewell.

Here's a funny letter from Bill Campbell explaining why he couldn't join our Boston Class Party in May: "Many thanks for your note and invitation to the Boston Class Dinner. It is nice to think about all you classmates and our younger and funnier days together. Don't know whether I'll be able to get to Boston for May 8 at this writing. Will certainly try to be there but seem to get busier than the one-armed paper hanger. Business is brisk and the only trouble is to take care of it. I have to go on a 10-day trip to the Middle West and then spend some time in Fulton, N. Y., before one of the technicians there leaves for Switzerland in June. It looks as if I'm hooked for just the time I would like to be in Boston. My best to Henry and George, and to Fran, too, and behave till I see you."

In Framingham, Mass., the new Union Hospital, built at a cost of \$1,400,000 was dedicated on September 19. Max Woythaler is president of the Hospital and devoted a great deal of time and energy in raising the necessary funds for this splendid development. Congratulations to Max! Later on he will join with Wink Howlett in planning our 40th Reunion in 1955.

It may be late to report our Boston Class Dinner of May 8 but it was so outstandingly successful and enjoyable that I know you'll want to read about it. Held at the new M.I.T. Faculty Club, with its excellent facilities, it was one of the best, attested by this atomic attendance of 38 classmates and guests: Bert Adams, Bill Brackett, Whit Brown, Ray Doane, Fannie Freeman, Loring Hayward, (and son Loring, Jr.), Abe Hamburg (and son David), Seward Highley, Peter Hooper, Weare Howlett, Ralph Joslyn, Clive Lacy, Larry Landers and (Will G. Brown, Jr.), Horatio Lamson, Azel Mack, Hank Marion, Arch Morrison, George Moulton, Pete Munn, Frank Murphy, Harry Murphy, Charlie Norton, John O'Brien, Wally Pike, George Rooney (and guest R. W. McCormick), Al Sampson, Frank Scully,

Henry Sheils, Jay Sindler '17, Ed Sullivan, Speed Swift, Ercell Teeson, Elmer Waters, Easy Weaver. There can be no greater class spirit than Hank Marion's; he won the long-distance prize by coming from New York for this dinner. Hank closed the evening with a little get-together with some of the fellows and finally made the midnight back to New York.

Harry Murphy returned purposely from Florida for this affair, exhibiting his winter's tan. "Long time, no see," were Ralph Joslyn, Dick Doane, Ercell Teeson, Seward Highley and Peter Hooper, all of whom I am sure will never miss another of these dinners. Long distance competitors whom Hank Marion beat out were Whit Brown, Concord; Al Sampson, Beverly; Fred Waters, Marblehead; Loring Hayward, Taunton; Ercell Teeson, Southbridge; Speed Swift, New London, N. H.; and Charlie Norton, Martha's Vineyard. In this fine class gang of ours it is hard to name names of those who insure its success, but for these dinners the following "Satchel Paiges" did a great relief job: Henry Sheils, Pirate Rooney, Wally Pike.

Ercell Teeson's letter represents the general feeling of those present: "It was a pleasure to meet the 1915 Class. Even if the elapsed time has been considerable, I hope to make it more often in the future, particularly if the dinners are held when the going is good. I think in the Faculty Club you have an excellent place to hold these meetings and it is easily accessible. Any time you are out this way (Southbridge) I hope you will drop in to see me."

Allen Abrams, Marathon Corporation, Rothschild, Wis., has been elected president of the Industrial Research Institute, Inc. Congratulations to Allen!

From the Hartford, Conn., *Times*, July 9: "Harry C. Edgerton has been appointed works manager of Underwood Corporation's Burlington, N. J., plant. His most recent assignment was the establishment of a new factory for the company's Electronic Computer Division in Long Island City, N. Y., and prior to that he helped plan and develop Underwood's plant in Brighton, England. . . ."

In September, Ercell Teeson was elected president of the Southbridge Chamber of Commerce. Congratulations to these classmates for their promotions and achievements.

Early in the summer, Wally and Ardel Pike motored and walked (I guess) way up in the Canadian wilds around Temiskaming, Quebec, to go on a fishing trip with Harold Pickering of Ithaca. Old Course I pals, they must have had an exciting time, but from Wally's account you have to be brave to rough it at our age.

We all missed Parry Keller, a regular attendant at the Alumni Dinner, but we are glad to have his good letter: "Had planned to be in Cambridge and Boston this week to enjoy the Stein-on-the-Table Banquet, a get-together with the old gang and take a short vacation. I regret very much that I cannot make it for business reasons. The first time for many years that I have missed this June week with all its happy associations at my old stamping ground. Better luck next year! I expect to spend part of my vacation in October,

1953, in New England. My son, Parry, Jr., resides in Cleveland and is assistant rate engineer of the East Ohio Gas Company at the main offices in that city. His little daughter is now 15 months and I spend every other week end very happily with him and his family. Am rapidly making the grade as a grandfather. Remember me to everyone, and my very best regards to you and Fran."

The Grandfathers' Club keeps expanding with Chet and Margaret Runels, Lowell, announcing the birth of a new citizen, Robert Warren DeMallie, son of their daughter Miriam. This brings Chet close to Henry Sheils' record for grandchildren but I've really lost count of these high numbers.

Charlie and Bee Norton, down at Martha's Vineyard, are initiated into the Club with their first grandchild, Charles Simon Huntington, born on September 15, son of their daughter Natalie. "Charles Simon Huntington was registered by his proud grandfather, Charles G. Norton, at the age of 16½ hours. The grandfather has long been identified with archery in this state and if the youngster develops the same interest in sportsmanship as that of his grandfather, the perpetuation of the Martha's Vineyard Annual Striped Bass Derby is assured."

After Harold Colby's remarkable recovery and loyal attendance at the previous class dinner, we were all sorry to note from his good letter that he has had a recurrence: "It is with extreme regret that I will be unable to attend the Class Dinner. A slight recurrence of the attack on the 'ticker' hospitalized me from February through March. I am now at home to regain strength to get back into circulation. Feeling grand but must obey doctor's orders. . . . Madeline and I are enjoying the growing family of grandchildren. Virginia's little girl is over two years and a great chatterbox. Another baby is expected by the end of the month. My son, Walter, has a daughter four and one-half, and a son two. My son and daughter have purchased land in Hanover and are building and will move in this summer. It is only 18 miles away but we'll miss them. I'll try to be with you all at the next Class Dinner. Best regards to all who attend."

On a trip to New Haven, Fran and I had a delightful lunch and spent the afternoon with Marion and Vince Maconi. In June Marion won the New Haven Chamber of Commerce Spring Handicap Tournament and as a wife and grandmother of 1915 she certainly cuts quite a figure. Vince wrote: "Ted Brown dropped in the office the other day trying to line me up for the Class Dinner. I was glad to see him and suggested that he call on me again when I might have more time for a 'bull' session. Fran and you must have had a grand time in Nassau. We want to get there some day. Marion and I are looking forward to seeing the trip pictures with the usual stellar commentary. We spent a month at Delray Beach, Fla. — vacation pleasant, weather average — golf (phooey!) But we had a grand time. We are all well; our grandchildren total four after the addition of two during 1952. Sometime this summer we four should drive to the Cape while Weare and Catherine Howlett are there — just to upset

their regular routine. Perhaps the six of us could go to the Skytop Club in the Pocono Mountains in Pennsylvania. I belong there and could make arrangements. See what you can cook up. Marion and I send our best wishes to you and Fran." Unfortunately, we never have been able to get in that Cape trip with the Howletts but it really would be something, especially if we could add Ken and Esther Johnson who are Cape visitors in the summer.

Alice Chellman, writing for Lloyd from Washington, says: "We may be cracking up and needing a few new parts but the old Fifteen mates still have a lot of kick in them. We've missed your notes recently in *The Review*. That's the first thing we read and we do hope the 1915 column soon resumes."

During the summer, Henry Sheils and I drove out to see Sam Berke on business at his Deep Lake Farm, Lakeville, Conn. Always the genial host, Sam gave us a wonderful day, including a visit with his charming family, Evelyn and daughter Jean. Sam's immaculate dairy and well-organized and mechanized 700-acre estate reflect his well-known executive ability.

From Los Angeles comes a letter from Raymond Stringfield, following which he came to visit us. Except for a little added weight, he hasn't changed much, although I hadn't seen Ray for lo these many years. We had a delightful visit, and it is a pleasure to know that one of our classmates is so actively interested in M.I.T. affairs on the West Coast: "The welfare of my company and my aversion to paying any more taxes than necessary lead me to attend the meeting of the Division of Rubber Chemistry which will be held at the Statler in Boston May 26 to May 29. Am arriving by plane from Cleveland the late afternoon of the 26th, and have a dinner committee meeting that eve but will phone you at the first opportunity and hope we can get together and see how much difference in our appearance some 38 years make. Art Keating '17, who shares with Casselman '15, the dubious honor of being my roommate, has recently returned to Boston to take over the works management of Lewis and Shepard, so I will probably spend the week end at his place at Hyannis, and hope to get a chance to say hello to Bridge Casselman and Ray Walcott in New York the first of the week following. Best regards and hope to have a chance to see you." Come again, Ray, whenever you are in Boston, and that goes for all other classmates.

In Chicago, in September, I saw Carl Dunn, Vice-president of Albert Ramon Associates, industrial engineers. Except for his white hair, Carl has not changed. His work takes him into many interesting situations, outstanding among which was his recent flying trip to Bristol Bay in Alaska for a survey of the salmon fishing industry. After two weeks there in July, Carl flew to Hawaii to complete a five-year job the firm has been doing for the pineapple industry. Carl says the Island has been on the old Colonial system but now operates with modern industrial methods, an example of which is the increase in average hourly wages from \$.40 to \$1.25 with corresponding improvements in living and working conditions

for the natives. We are counting on having Carl at our 40th Reunion.

For years Ben Neal has been an officer in, and active in the Plastics industry. In May they had their annual convention in Bermuda. About his trip, Ben wrote: "I don't know whether I told you or not, but the *Queen of Bermuda* was chartered by The Society of the Plastics Industry exclusively; we left New York on Saturday, the 9th, got into Bermuda on Monday morning and while some of the folks had arranged for rooms ashore, most of us remained right on the ship. One thing that was especially interesting to me was that the old Course X boy, Clif Jacobs, was on the trip. As things turned out I actually didn't spend any time with him, but did meet him for a brief talk at dinner one night, and enjoyed it very much because I hadn't seen him since graduation. . . . After returning to New York, we drove over to Philadelphia to spend the week end, and on Sunday morning drove up to see Herb and Alice Anderson, which is only a half-hour's drive from where Lauretta's daughter and son-in-law live. We had a most delightful time and way overstayed the proper amenities for a brief call, but what are you going to do with a friendly couple like this? They had just returned from a very interesting trip to South America, and were threatening to go out to Minneapolis and the West in the early summer, at which time we used our best persuasion to have them stop off in Buffalo. We looked the farm all over, including the birds, ducks and chickens; it is a beautiful location, as you well know, and I am sure that Herb and Alice enjoy it fully. They wished to be remembered to all the gang whom I might run across."

Remembering Herb and Alice's generosity and hospitality we can well imagine the pleasant reunion Ben and Lauretta had with them. Later Ben wrote that he and Gabe Hilton attended an M.I.T. dinner at the Buffalo University Club and that Bill McEwen and he had lunch at the Buffalo Country Club but it was so cold and rainy they had to cancel their golf date. We're all glad to note that Ben says that Bill seems to be in pretty good health, better than he has been for some time.

For our Boston dinners we have been trying to get the Connecticut class group to attend. String Hill and Stan Osborn wrote their regrets and Ted Brown sent this nice letter: "It looks as if the Connecticut crowd would be again among the missing. I stopped in to see Vince Maconi in New Haven. He has a heavy date for the next night and doubts the wisdom of two in a row. String Hill said he couldn't possibly make it. Stan Osborn was very doubtful but might make it. He spent some time this last winter in the hospital. I didn't get in touch with Larry Quirk. The Rotary Club here in Manchester sponsors a Youth Week this week from May 4 to the 9th. I am on duty the evenings of the 9th and 10th, and I don't see how I can get away. Please remember us to all the gang, and better luck next time."

James F. Hoey, Jr., '43, who has attended several of our Boston dinners as a representative of his unofficially adopted Class, was married on August 20 to Jane

Frances Byrne at St. Mary's Church, Brookline. They spent their wedding trip on Jim's cruiser, stopping at Martha's Vineyard to see Charlie Norton. All the best from our Class to this delightful young couple. Jim was chairman of their 10th Reunion held in June at Plymouth, Mass. It was '43's first get together aided and abetted by the 1915 experience. As a result of the successful reunion Jim was elected president of the Class which includes 1915's sons, John Lacy, Gene Eisenberg, and Bill Place.

Next month, our column of notes will continue with a glowing account of the Boston Class Dinner held in October and our plans for a New York-Philadelphia dinner. Meanwhile "help Azel" with a flock of letters about yourselves! — AZEL W. MACK, *Secretary*, 40 St. Paul Street, Brookline 46, Mass.

• 1916 •

We are embarking again on one of our truly pleasant responsibilities. Fall is with us, and Mr. Editor of The Technology Review is once again knocking on our door for items of interest about the members of the Class of 1916. We've always been able to greet him with a smile in the past and have given him enough in the way of class notes to keep him busy and happy. We are confident that we will be able to continue our pleasant relationship. There you have it fellows! You've got the ball. You can hand it off, lateral it or pass it, but whatever you do, don't drop it, at least not until we have crossed the goal line which won't be until we have turned in our material for the ninth and final issue of this current season sometime in late May of next year.

For those of you who are keeping the class address list up to date, here are the latest changes of address: Walt Binger, 115 East 40th Street, New York 16, N.Y.; Jack Camp, Livio 109, Mexico City, D.F., Mexico; Mrs. Arthur C. Comey (nee Elizabeth G. Pettee), Beaver Pond Road, Lincoln, Mass.; Willard Crandall, 470 East 161st Street, New York 56, N.Y.; Fred Hazard, 14 South Oak Street, Hinsdale, Ill.; John Hood, 28 Erwin Street, Cooleenmee, N.C.; William Ogden, 4630 Yuma Street, N.W., Washington 16, D.C. (back from Java, Dutch East Indies); Nat Warsaw, 1440 Beacon Street, Brookline, Mass.; Andrew Witherspoon, Pines on the Severn, Box 158, Arnold, Md.

The big class activity of note in recent months was the combination 37th Reunion at the Coonamessett Ranch Inn in North Falmouth, Mass. on June 5, 6, 7 and the Class Cocktail Party at the Hotel Statler in Boston on Alumni Day, June 15. Take it from those who attended either or both of these functions, an excellent time was had by all. You will all be interested to know that the following members of the Class were at the Reunion on the Cape: Jimmie Evans, Hy Ullian, Cy Gueathing, Hal Russell, Ralph Fletcher, Nat Warsaw, Emory Kemp, Karl Engstrom, Gene Lucas, Jack Burbank, George Petit, John Woods, Dick Berger, Willard Crandall, Bill Drummey and Lew Pratt. Again, we had wonderful weather for the Reunion, and it was a very restful and enjoyable week end for all of us.

There was a little golf, lots of conversation, excessive relaxation and wonderful eating. All who attended are looking forward to next year and the 38th with the hope that other old friends will supplement the group. Our Class Cocktail Party also turned out very well and was attended by: Dick Hunneman, Clint Carpenter, Mr. and Mrs. Steve Berke, Mr. and Mrs. Hy Ullian and their son Joseph, Mr. and Mrs. Jap Carr, Mr. and Mrs. Tom Berrigan, Karl Engstrom, Mr. and Mrs. Izzy Richmond and daughter Jean, Mr. and Mrs. Joe Barker and friend, Mrs. Houston, Mr. and Mrs. Ralph Fletcher, Bill Brown and Shatswell Ober. Make a note now that you are going to be among those present at our Alumni Day Class Cocktail Party next June.

Here are a few news items that have accumulated during the summer months and tell us of interesting activities and accomplishments of classmates. "Carl H. Holmberg of 6 Pleasant Street, Wakefield, formerly an assistant professor in the civil engineering department at Tufts College, Medford, Mass., has been raised in rank to associate professor, Dr. Nils Y. Wessell, Tufts' acting president, announces. A graduate of M.I.T., who received the degree of Master of Science from that school in 1937, Professor Holmberg has been a member of the Tufts faculty since 1926. He is a member of the American Society for Engineering Education and the Boston Society of Civil Engineers." Bob Wilson has written the introductory remarks to a booklet entitled *Industrial Research and The Atomic Future*, June, 1953. Vannevar Bush has written the "Foreword" to a book entitled *Index* (Mass. Institute of Tech. Radiation Laboratory Series) edited by Keith Henney.

Izzy Richmond made his television debut this past June when he appeared as a panel member on the panel discussion of Jewish Religious and Cultural Architecture on the program, "Our Believing World," WBZ-TV, Channel 4. Izzy also was recently elected to the presidency of the Boston Society of Architects. Frank Ross still is an outstanding golfer as is indicated in this write-up: "Frank D. Ross, 59-year-old West Hartford, Conn., insurance executive, shot a three-under-par 69 over the Apawamis Club course today (June 5) to win the 49th annual United States Seniors' Golf Championship. Needing only another 73 to win the 36-hole test, the former New England and Connecticut State amateur champion fired the best round of the tournament for a total of 142 and won by four strokes over Weller Noble of Berkeley, Calif. Ross started out with a birdie-eagle-birdie-birdie on the first four holes and coasted to a 32-37-69 performance. . . ." How about giving a few lessons at our next reunion, Frank? There are at least a few of us who could use them.

Then there is this item about Gene Barney: "Appointment of E. J. Barney as director of general supply of the Allison Division of General Motors Corporation was announced today (5/1/53) by E. B. Newill, Allison General Manager. Barney, a native of Dayton, Ohio, and a graduate of Denison University and Massachusetts Institute of Technology, has been with General Motors since 1920. Previously, he

had worked with the General Motors Export Company, the Frigidaire Division, and the Detroit Diesel Division, where he was production manager. Prior to joining the Allison Division, Barney was plant manager of the Wayne Plant of Detroit Diesel Division." John Hood is now working as a chemist for the Erwin Mills in Cooleemee, N.C. Colonel Bill Brown sent us a note telling us, "I am being transferred from Cambridge, Mass., Research Center to the Wright Air Development Center at Dayton, Ohio. It's a game of 'musical chairs' which the Air Force plays."

Cy Guething made us aware of an important event in his life when he wrote following the Reunion: "Hope to make it next year again, although I am in the old age class, having passed 60 on 7/14/53." Our golden-voiced classmate, Barney Gordon, is a member of the Board of Trustees of the Lowell, Mass., Technological Institute and looked fine in a picture of this group which appeared in the Lowell paper. Hen Shepard occasionally stops at your Secretary's office and is looking very well. He is still as enthusiastic as ever in his interest in old cars and is always anxious to learn of the whereabouts of one of the original "horseless carriages." Our Assistant Secretary managed to get out of New York City for a short while this past summer when he made a trip to White Sands, N.M. Joel Connolly, still covering a lot of territory, sends us his best wishes from the King's Palace Grounds in Bangkok, Thailand. We received a nice card from Harold Burkhardt which he sent us while he was enjoying "good weather and fishing" on vacation at Quosoc, Me.

Dick Berger's research on cancer prevention has been receiving a great deal of attention in Bridgeport as evidenced by a number of clippings which Dick has sent us. All of us have read of Dick's work in these columns. It would be impossible to quote all the newspaper items in this column now. Keep up the good work, Dick!

Here is an interesting account about the work of Joe Barker's organization. "New York, June 15. Grants in aid of research amounting to more than \$135,000 since April 14 were announced today by Dr. Joseph W. Barker, president of Research Corporation, a non-profit foundation which has distributed approximately \$7,500,000 in grants since it was established by the late Frederick Gardner Cottrell in 1912. The current grants were made on the basis of the recommendations of the Advisory Committee on grants at its fifth and final meeting of this academic year. It will meet again in September to consider further applications made during the summer. . . . Of the 64 grants announced today, 45 were awarded under the Cottrell grants program, which aids science and teaching in the smaller colleges. The remaining 19 go to institutions under the general grants program, to support research of a pioneering nature. . . ."

We regret very much that we must close this column on a note of sadness. We must report to you the deaths of the following classmates: Joseph W. Griffin, Washington, D.C.; Walter S. Aiken, Lee, Mass., and Paul H. Buxton, Alton, Ill. We

also regret to report the passing of Bill Drummey's wife recently. Finally, it is our difficult task to report the deaths of sons of two members of our Class. Hasbrouck Fletcher '51, 23, son of our Secretary, was killed in an automobile accident while home on furlough from the Army in August. Arthur Gilkey, son of Herb Gilkey, was lost in an avalanche while a member of an American mountain climbing expedition which tried in vain to conquer the icy vastness of 28,250-foot Godwin Austen in the Himalayas, the highest unclimbed peak in the world. May they and all the other deceased members and friends of the Class of 1916 rest in peace.

Remember, fellows, this column will only be as good as you make it. It is your letters which make it interesting and not any literary talent that we might have. You've been wonderful all these years. Let's make this year no exception. — RALPH A. FLETCHER, Secretary, P.O. Box 71, West Chelmsford, Mass. HAROLD F. DODGE, Assistant Secretary, Bell Telephone Laboratories, Inc., 463 West Street, New York, N.Y.

• 1917 •

At the May meeting of the Alumni Council the Executive Vice-president, H. E. Lobdell, was introduced by President Ryer '20 as "the only known exponent of the rugged siesta." This apparently was based on Lobdell's frequent trips to Mexico and his high and un concealable enthusiasm for any country or any portion of the U.S. in which Spanish is spoken. Said exponent's presentation of his annual report covered much ground literally and figuratively and was received with enthusiasm by the Council.

As has been customary, 1917 helped significantly in the annual celebration of Alumni Day in DuPont Court, at the Statler, and at various points on the campus. E. P. Brooks, from the towering heights of his position as Dean of the School of Industrial Management, presided at the luncheon — and with the help of Mrs. Brooks, presided most ably. Robert Erb was not present but was excused — Joe Gargan reported attendance at the garden party given for Bob and his prospective bride by J. Franklin McElwain '97 at Cohasset on the preceding Saturday. The wedding was scheduled to follow on June 30 if our records are correct. It was officially reported that Ted Bernard stayed awake all through the long luncheon ceremonies — undoubtedly a tribute to presiding officer Brooks. Ted was out of your recorder's range of vision in the evening but with the new streamlined dinner program we have no doubt that he stayed awake there. Reference was made to the fact that while M.I.T. was attempting to humanize the sciences, Harvard was trying to simonize the humanities. One or two comments of this sort, plus the noise created by Dennie, plus an unusually able dinner talk by Erwin D. Canham, Editor of *The Christian Science Monitor*, kept everybody alert during the evening. Undoubtedly the hand of one H. E. Lobdell, who crashed the head table with his partner in crime, Don Severance '38, Secretary and Treasurer of the Alumni Association,

was accredited with the new and better program. President Killian's annual report to the Alumni is now given at the duPont Court luncheon where it is listened to and enjoyed attentively, making a unified plan for both occasions.

Refreshments and intellectual discussion were enjoyed by 1917 at the St. Botolph Club prior to the dinner through arrangements made by President Stanley Dunning, financial details handled by Rudy Beaver. Recorded as present at one or another occasion were the following: Rudy Beaver, Ken Bell, Ted Bernard, Ray Blanchard, Penn Brooks, Ken Childs, Stuart Crandall, Bill Dennen, Stan Dunning, Joe Gargan, Heinie Gartner, Art Gilman, Clarence Holt, Bill Hunter, Stan Hyde, H. E. Lobdell, Al Lunn, Win McNeill, Ray Stevens, Henry Strout, Gerald Thomson, and Ed Woodward.

And it is with deep regret that we were notified soon after Alumni Day of the death of Stuart Crandall on July 20. Stuart, who was president of Crandall Dry Dock Engineers, Inc., had begun his career as an assistant engineer in his father's dry dock firm. He was president of the Boston Society of Civil Engineers, and a member of many other engineering, fraternal and social organizations.

Three retirements were recently noted — the first of those we will now begin to observe. Heinie Gartner is in the furniture business — making it himself, having it finished by Mrs. Gartner in Wellfleet, Mass., their place being known as The Barncrafters. Ken Bell sent word he was retiring as of the end of 1954 to establish his home and headquarters at Melvin Village, in Wolfeboro, N.H. Win McNeill has established himself as a management consultant at 270 Park Avenue, New York City, covering general management, manufacturing controls, personnel management, accounting, and controllership.

Lewis W. Douglas, former Ambassador to Great Britain, was named chairman of a mid-century conference on the evaluation and long-range use of the country's natural resources, to be held in the late fall. One of the vice-chairmen will be Karl T. Compton, of M.I.T.

Dr. W. Thurber Fales died recently of a heart attack in Baltimore. He was a nationally recognized authority on health problems and had been employed as director of the bureau of vital statistics in health for the state of Maryland for the past 20 years. Dr. Fales had traveled to about every country in the world lecturing on health and during President Truman's administration served on the President's health commission for several years.

Dr. Ell'11, President of Northeastern University, announced recently that Professor Alfred J. Ferretti, Chairman of the Mechanical Engineering Department, will become acting head of the School of Engineering for a year, effective August 15.

The following change of address notes have been received: Commodore Penn L. Carroll, from Frankfort, Ky., to Instituto Tecnológico de Monterrey, Apartado #118, Monterrey, N.L., México. Paul Gardner from Kansas City, Mo., to Las Milpas, San Patricio, N.M. John L. Parsons is now located at 33 Benton Avenue, Waterville, Me., and Francisco G. Sada, Jr., at Circunvalación 2208, Monterrey, N.L., Mexico.

Louis A. Ferguson, Jr., from Chicago to 441 Australian Avenue, Palm Beach, Fla. Lt. Commander Thomas L. Blakemore is now located at 2880 Granville Road, Columbus, Ohio; and William B. Colleary, Off South Main, Centerville, Mass.

Selection of the U.S. Army Reserve School at Scranton, Pa., as the "outstanding school in the Pennsylvania Military District" rates kudos for Colonel William L. Dennen, commandant of the school. An account says "Establishment of an armory for the Army's Organized Reserve Corps of the area was accomplished a comparatively short time ago. The center's training school is a primary function and the citation just presented best illustrates the efficiency with which it is being conducted and the vigor with which its mission is being carried out."

The *July Armed Forces Chemical Journal* displays a beautiful portrait of Harry A. Wansker as a new face on the Executive Committee of the A.F.C.A., he being its fifth vice-president and chairman of the Meetings and Convention Committee. Harry has been active in Chemical Warfare affairs in New England and now moves on up to a more active part in the work of the national Association.

Edward P. Warner of Montreal, who has been council president of the International Civil Aviation Organization since 1945, recently predicted that regular jetliner service between the U.S. and Europe is at least two or three years away, in spite of jet bombers now flying the Atlantic in less than six hours. Dr. Warner brings to his forecasting considerable background in the flying field. A former teacher of aeronautics at M.I.T., he served as President Coolidge's Assistant Secretary of the Navy for Air and also as vice-chairman of the Civil Aeronautics Board.

A recent note from David E. Pierce advises "I am now engaged in full time consulting work after 11 years as chief engineer with General Aniline and Film Corporation. Most of my work at present has to do with maintenance, its budgeting and control."

A note from Peso Moody in Malvern, Ark., says: "Working for a pipeline company is like working for a railroad — they continually shift you from one end of the line to the other. In April my company started building six new compressor stations and making additions to the five already in operation. They sent me back here to Malvern, which is about the center of the line, as assistant superintendent of construction, and I am traveling from below Houston to near Chicago. . . . I sure enjoyed the Reunion last year, and hope to get back to New England one of these days." — RAYMOND STEVENS, *Secretary*, Arthur D. Little, Inc., 30 Memorial Drive, Cambridge 42, Mass. FREDERICK BERNARD, *Assistant Secretary*, 24 Federal Street, Boston 10, Mass.

• 1918 •

The Reunion at Weekapaug was such a happy time that it was seriously suggested we consider having one every year. There were 83 of us fulfilling together the promise of freedom from encircling irritations, the joy of renewed good fellowship, the pleasure of old and happy memories, the

satisfactions of a well appointed hostelry, and the stimulus of intellectual and emotional fulfillment.

Friday evening was begun by listening to a tape recording which Fred Philbrick had arranged, bringing us greetings from Dr. Compton, President Killian '26, and such old academic acquaintances of ours as Professors Kurrelmeyer, Fuller '92, Lewis, Hudson '07, Schell '12, Prescott '94, Millard, Lawrence '95, and God bless him, Uncle Horace Ford of the \$5.00 fine. There followed some lovely Kodachromes Philbrick had taken in his travels, and a modestly presented but scientifically extremely important movie on the growing of quartz crystals by the originator himself, Albert Walker of our own ranks. On Saturday Harold Collins won the golf tournament, expertly run by Charlie Watt. Johnny Clarkson won the horseshoe pitching, and Al Grossman took the prize at the Hobby Show for his collection of minerals. Incidentally, other Classes please note: our Hobby Show, carried off under the pleasant direction of Mr. and Mrs. Leonard Levine, was an enormous success. The idea is worth copying.

Saturday evening Bill Foster, who in the goodness of his generous heart had flown in from a White Sulphur Springs conference of the Manufacturing Chemists' Association (see below) gave us an off-the-record account of world conditions. Few men would be as well fitted to do so. His opportunity as top Administrator for Economic Co-operation (Marshall Plan), and subsequently as deputy U. S. Secretary of Defense, to observe and to interpret with accuracy what has been happening between nations as the earth pursued its unerring journey around the sun, has been superlative. The information he shared gave us all pause for thought. Afterward, those with sufficient wind and limited girth enjoyed dancing. Others sang the old songs with Selma Seltzer at the piano.

Present were Mr. and Mrs. N. F. Alvare and daughter, Harold Atwell, Julian Avery, Sidney Blaisdell, Mr. and Mrs. Stuart Boyd, Eli Berman, Tom Brosnahan, Mr. and Mrs. Harold Collins, John Clarkson, Mr. and Mrs. Lester Conner, Mr. and Mrs. Yale Evelev and son, Mr. and Mrs. Saxton Fletcher, Mr. and Mrs. C. C. Fuller, William Foster, Mr. and Mrs. Stanley Franklin, Gardner Gould, Donald Goss, Mr. and Mrs. Alfred Grossman, Mr. and Mrs. George Halfacre, Mr. and Mrs. Craig Hazelet, Mr. and Mrs. John Hanley, the Howard twins, Paul and Alan, Sidney Judson, Mr. and Mrs. John Kennard, John Kilduff, Mr. and Mrs. Thomas Kelley, Mr. and Mrs. Harry Katz and daughter, Mr. and Mrs. Leonard Levine, Mr. and Mrs. Herbert Lerner, Mr. and Mrs. James Longley, Elmer Legge, Professor and Mrs. Alexander Magoun, Ralph Mahony, Mr. and Mrs. Robert Means, Ray Miller, Herbert Polleys, Mr. and Mrs. Theodore Pierson, Gretchen Palmer, Fred Philbrick, Mr. and Mrs. Walter Robinson, Wingate Rollins, Mr. and Mrs. Alan Sanger, Mr. and Mrs. Max Seltzer, Mr. and Mrs. Arthur Smith, Professor and Mrs. Carleton Tucker, Mr. and Mrs. Charles Tavener, Mr. and Mrs. Royal Barry Wills, Dr. and Mrs. Albert Walker, Mr. and Mrs. Charles Watt, and Frank van Zelm.

At the class election Saxton W. Fletcher was elevated to President of the Class, Fred Philbrick assumed the duties of Treasurer, and Alexander Magoun was returned to his former post as Secretary not, however, without the knowledge that Gretchen has served the Class better and in more ways than most of us will ever know. There is much other news of the brethren, but because of the summer break every Secretary has a full folder. Hence for now only the pressing items. Bill Foster, after seven years of important service to the United States government, has been elected the first full-time president of the Manufacturing Chemists' Association. Membership includes such titans as DuPont, Merck, American Cyanamid, Dow, Allied Chemical, and a hundred others. Bill is still a member of the business advisory council of the Department of Commerce and a trustee of the research and policy committee for the Committee for Economic Development. George Halfacre, who started with the New Jersey Zinc Company after graduation, has now risen to be its Manager of Manufacturing. He was general superintendent of the Palmerton Plant. Henry Richards now has full professional rank at Northeastern in the Electrical Engineering Department. — F. ALEXANDER MAGOUN, *Secretary*, Jaffrey, N.H.

• 1919 •

Harry Kuljian was a guest of honor last February at the opening of Asia's largest power station at Bokara, India, and sat at the right of Prime Minister Nehru as the latter threw the switches putting the plant into operation. The 35 million dollar power station 120 miles north of Calcutta was built by the Kuljian Engineering Corporation, of Philadelphia, under a plan to develop the 300-mile-long Damodar Valley, site of India's greatest concentration of industry. Since Harry founded his company in 1930, it has designed and built power plants exceeding \$500 million on four continents. The office of his company is unique — the converted Widener mansion with wide staircases, marble floors and pillars, and stained-glass windows.

A fine letter from Wirt Kimball '18 offering his help for our 35th year reunion and making some good suggestions. He writes, "Still am a manufacturer's agent with equipment for the process industries and can't complain about business, although like everyone else could still handle more without too much trouble. My son Clark enlisted in the Navy in April 1951, went to EM school at Great Lakes and was recently made EM 3. He was married last December and is due for sea duty this fall for the balance of his enlistment. My wife is still well."

We extend our sympathy to the family of Scott Keith, who died suddenly on July 4. He was a partner in the engineering firm of Metcalf and Eddy of Boston, a specialist in water supply engineering and hydraulics, and had been with the firm since 1920. During World War II he was chief engineer in its New York office at the time of the designing of the Bermuda Army air base. He was director of the New England Water Works Association and a member of the American

Society of Civil Engineering and the Boston Society of Civil Engineering.

Aubrey Ames is still president of Western Audograph, Inc., distributing dictating machines in California, Oregon and Washington. Congratulations to Ted Shedlovsky, recently elected a member of the National Academy of Sciences. Ted is with the Rockefeller Institute for Medical Research.

Eugene McLaughlin died last May in Quincy, Mass. For 40 years he had been connected with the New England Telephone and Telegraph Company, and at the time of his death was metropolitan commercial personnel supervisor of the company. He was a veteran of World War I and a member of the Braintree Post, American Legion; a director of the Quincy Community Chest and Quincy Chapter, Red Cross; and a member of the Weymouth Rotary Club and of St. Agatha's Holy Name Society. Our sympathy goes to his family in their loss.

Present on Alumni Day in June were Catharine Atwood, Art Blake, Janette Emery, Joseph Higgins, Ross Hysom, Don Kitchin, George McCreery, Isidor Slotnik, Leighton Smith, Earl Stevenson, and H. S. Weymouth from the Class of '19. Alex Wiren is currently at work on two more of his writings, "Your Good Judgment" and "How Much Will You Enjoy Your Pension?"

We were sorry to learn of the death of Allan Knowles last May. He had been town clerk and treasurer of Yarmouth, Mass., for the past 20 years, and was a director of the First National Bank of Yarmouth and of the Barnstable County Mutual Fire Insurance Company. He had formerly practiced architecture in Boston.

Jack Braverman's son, Richard, is in Korea with the 7th Infantry Division, and is expected back in May, 1954. Jack's daughter, Nancy, was graduated from Bates College last June and is going to N. Y. U. for master's degree in bio-chemistry. Jack hopes to "see all the fellows hale and hearty" at the Reunion.

Charley Drew came from Minneapolis in June to attend meetings of Kiwanis International in New York City. Lester Wolfe continues to be in the steamship business as president of the William J. Rountree Company, New York City. New home address: R. F. D. Stockton, N.J. Art Page at Stoneham, Mass., writes that he is very busy in candy—Daggett Chocolate Company. His son was graduated from Wharton School of University of Pennsylvania in 1952, entered the Army and was graduated from Infantry School, and is now instructor at Camp Rucker, Ala.

Our deepest sympathy goes to Leo Beaulieu in the death of his wife, Antonia, in an automobile accident on August 26. Leo writes that the accident, which was a very slight one, occurred in Pittsfield, Ill., while he, his wife and two children were on the last lap of a very enjoyable trip.

Congratulations to Albert Mayer on becoming a fellow of the American Institute of Architects for design and education. Charlie Chayne, Vice-president of General Motors, appeared with the Motorama of 1953 wherever it was presented. As head of G.M.'s Engineering Staff, Charlie is responsible for coordinating the engineering activities of the various G.M.

divisions.—EUGENE R. SMOLEY, *Secretary*, The Lummus Company, 385 Madison Avenue, New York 17, N.Y.

• 1920 •

Greetings to you all after the long summer hiatus which your Secretary sincerely hopes proved extra pleasant and fully restorative in preparation for the long winter months ahead.

The Class had extra good representation at Alumni Day last June as evidenced by the following list of classmates: Anthony Anable, E. Franklin Badger, Harold Bugbee, Percy Bugbee, Alan W. Burke, F. Scott Carpenter, Edward L. Cochrane, George F. Des Marais, Herbert M. Fedehen, Fred M. Gill, Alfred T. Glassett, Daniel J. Hennessy, Pierre F. Lavedan, John M. Nalle, L. G. L. Thomas, B. Alden Thresher, Scott H. Wells, Ernest P. Whitehead, A. B. Wason, Jesse Irwin Doyle, Robert D. Patterson, E. D. Ryer.

Welcome word was received from Skeets Brown, 3101 Gold Street, El Paso, Texas. Skeets has a married daughter who graduated from St. Marys at South Bend, another daughter who graduated from Scripps College, Claremont, Calif., and who plans to attend Katherine Gibbs School in Boston this fall, a son who is a sophomore at Pomona College, taking a pre-med course. Skeets is the proud grandfather of a three-year-old girl and a one-year-old boy. Skeets has recently been promoted to the position of general manager of the Mexican Mining and Refining Company. He has been with this organization since 1922. His work keeps him in Mexico about half of the year and he says he makes frequent trips to New York.

Phil Young has been appointed secretary of the Standard Oil Development Company which is the central research and engineering affiliate of Standard Oil Company of New Jersey. Phil has long been manager of the Development Company's Patent Division. He is a member of the New York Bar and a member of the New Jersey Patent Law Association and National Patent Law Association. He is the holder of a number of patents, mostly in the hydrogenation and cracking field. Harold Smiddy, Vice-president in charge of management consultation services, General Electric Company, was a speaker at the National Office Management Associations Conference in Boston recently. Norrie Abbott thoughtfully forwarded to me a letter from Henry Dooley written from his home, the Pelican Club Apartments, Hendricks Island, Fort Lauderdale, Fla. Henry says he hopes to see us all at the 35th.

Your Secretary had a very pleasant visit with Mr. and Mrs. Bunt Murphy earlier this year. Bunt, as these notes have previously mentioned, is executive director of the Berkshire Industrial Farm, Canaan, N.Y. Tony Anable says that John Lucas is with the Dorr Company and is living in Norwalk, Conn. Edmund Sullivan is living in Bay St. Louis, Miss., having left Atlanta, Ga. Louis Harris is in Wilmington, Del., address 3201 Washington Street. Sherman Barrett is now in Reading, Mass., address 195 South Main

Street. Larry Boyden has left Winnetka and is now in Punta Gorda, Fla. Frank Foley is in Chicago, address 105 West Adams Street; Carleton Alexander has left Fairbanks, Alaska and is in Wickliffe, Ohio, address 1408 East 300th Street. Albion Doe is now a professor at University of Bridgeport, Industrial Engineering Department, 219 Park Avenue, Bridgeport, Conn. Another professor is Lauro Martinez-Carranza, 5 de Mayo, Pte 104, Monterrey N. L. Mexico.—HAROLD BUGBEE, *Secretary*, 7 Dartmouth Street, Winchester, Mass.

• 1921 •

Welcome to our thirty-third season of informal gatherings amidst the good fellowship around the cheery 1921 hearthstone. These sessions are greatly dependent upon your continuing to send in news of yourself and other members of the Class of 1921. Our sincere thanks and appreciation go to you for the splendid support which your Secretary has received throughout the years. It is our earnest hope that you will carry on with this most helpful assistance to insure the adequacy of these notes.

Alumni Day 1953 has come and gone since we last met on these pages. The evident enjoyment of 55 members of the Class, wives, sons and sweethearts points up our annual party as a unique event in the long list of other meetings to which we are subjected throughout the rest of the year. As the glowing reports of the gathering have gotten around, the June anniversaries between our quinquennial reunions have seen increasing attendance at this one-day stand in Cambridge and Boston. This year, Ed Praetz, George Welch, Joe Wenick and your Secretary attended the dinner for Honorary Secretaries and alumni club officers given by President Jim Killian '26 on the eve of Alumni Day. The next morning, groups from the Class collected at registration time, during the departmental reunions and around the luncheon tables. A welcome was extended to Robert M. Lurie '52, son of Mrs. Lurie and the late Joe Lurie, and his fiancée, Nancy Alperin. Other members of the junior league greeted at the lawn party were Peter Gartland, Dartmouth '54, son of Joe and Mrs. Gartland of Cleveland, Ohio, and John Steffian, University of Pennsylvania '56, son of Ted and Mrs. Steffian of Boston.

Introduced by Jack Rule, head of Course IX and the Institute's Section of Graphics, our Class President, Ray St. Laurent, officially dedicated the World War II Memorial in the Main Lobby of Building 10 as the gift of the Class of 1921 to M.I.T. Special movies, inspection tours, and an enjoyable reception at President Killian's residence preceded our party at the Hotel Statler, Boston. Saul and Regi Silverstein were present this year as the generous and genial hosts of the festive board. Ted Steffian presided over the entertainment and Bob Miller screened the photogenic records of the Class which he has maintained since the group picture in 1921. Late that evening there were fond farewells as the group left the banquet with their souvenir steins.

Among those present were: Elly Adams,

Nancy Alperin, guest, Ollie Bardes, Mich Bawden, Harry Butters, Cac Clarke, Josh Crosby, Jim Cudworth, Ed Delany, Chick Dube, Al Edson, Rod and Mrs. Eskew, Joe and Mrs. Gartland and son, Peter, Paul Hanson, Bob Haskel, Roy and Mrs. Hersum, Moose LeFevre, Bob Lurie '52, Ted McArn, Ed MacDonald, Charlie MacKinnon, Leo and Mrs. Mann, Bob Miller, Phil and Mrs. Nelles, Vic and Mrs. Phaneuf, Ed Praetz, Herb and Mrs. Reinhard, Harry Rosenfield, Slide Rule, Ray and Mrs. St. Laurent, Steve Seamos, Saul and Mrs. Silverstein, Dick Smith, Ted Steffian and son, John, Harold and Mrs. Stose, George Thomson, Walter and Mrs. Vitalini, Bill Wald, Gene and Mrs. Weil, George Welch, Ev Wilson.

Missing for the first time were Chick and Frieda Kurth and Helier and Graciela Rodriguez. Chick had to be away on business. We know the Class joins us in sincere sympathy to Helier and Graciela on the passing of his father on May 7. It was most pleasant to have a phone call from Helier later in the summer when he attended a motion picture convention in New York. He said that the Vic Phaneufs arrived in Havana on the day of his father's death and he regretted not having been able to entertain them. We are still awaiting a note from Vic on the trip. It was also a disappointment not to have the Jack Barrigers on hand after so many months of pleasant anticipation. Jack had already left the vice-presidency of the New York, New Haven and Hartford Railroad to return to Chicago as vice-president of the Chicago, Rock Island and Pacific, an early interest, as we recall, in his distinguished railroading career. The Barriger family is living at 622 Oak Street Winnetka, Ill., and the Rock Island is already making national headlines for its forward thinking in adopting an advanced design of automatic switching and crossing protection for a very busy stretch near Chicago which is intersected by other railroads.

Special Course VI-A news includes the announcement of a fourth edition of Professor Emeritus Bill Timbie's famous text, *Elements of Electricity*, which now encompasses transistors, radar and television in a section on electronics and control systems. Hexalphas have often remarked that not one member of this first class of this first co-operative course in the United States was included in the 1921 graduation picture because they were all away at various industrial concerns that term. Dug Jackson had made a series of pictures for his father, the late Professor Dugald C. Jackson, and it is through the kindness of Ednah Blanchard of the Department of Electrical Engineering that we have obtained them for Bob Miller to prepare slides. The central group includes Larry Buckner, the late Clyde Chatham, George Chutter, Phil Coffin, Ray Fisher, Ralph Gilbert '19, George Owens, Ted Rose, Walter Ross, Paul Rutherford, John Scott, the late John Seddon, Chen Chi Wang, Dave Woodbury and the group's mentor, Professor Bill Timbie. Supplementary snapshots include Cookie Cake, Mahlon Hartley, the late Charlie Longfellow, Jr., Bill Matthews, Herb Nock, Rufe Shaw, Jim Smith, Ralph Wetsten, Harry Witherow and Woodie Wood. Dug

Jackson's likeness is not in the group and we wonder if any others have been omitted.

A. Warren Norton, former president of Press Wireless, Inc., and Press Wireless Manufacturing Company, has been elected to the board of Carr-Consolidated Biscuit Company of Wilkes-Barre, Pa., according to the *Wall Street Journal*. Warrie is a business consultant and practitioner with offices at 33 West 42nd Street, New York City, and an impressive record in *Who's Who*, which lists, in part, his activities as publisher of the *Christian Science Monitor*, publisher of the *Boston Transcript* and executive of O'Mara and Ormsbee. Warrie and Mrs. Norton have two married sons, Edward and Warren, and two grandchildren, Lynn and Dee Ann, respectively five years and six months old. Art and Mrs. Skilling of Greenwich, Conn., have announced the engagement of their younger daughter, Susan, to Robert Jeffrey of New Vernon, N.J. Susan was graduated from Wellesley in 1951. The elder daughter, Sarah, a Mt. Holyoke graduate, is married and has a three-year-old son. Art is manager of market analysis for Socony Vacuum Oil Company, New York City. Harry Rosenfield's second daughter, Joan, was graduated from Wellesley last June. Roberta is married and has a four-year-old son, Peter; Jay was graduated from M.I.T. in 1951 and Wilma is in high school. Harry is president and manager of the National Laundry Company, Dorchester, Mass. Rod and Mrs. Eskew have a new son, now a year and a half old. Rod heads the chemical engineering and development division of the Eastern Regional Laboratory, Department of Agriculture, Philadelphia. G. Howard LeFevre has been elected vice-president of U.S. Smelting Refining and Mining Company, New York City. Moose, who still maintains "blessed singleness," lives in Larchmont, N.Y.

Lincoln B. Barker reports a new address, R.D. No. 1, Ballston Lake, N.Y. He is with General Electric in Schenectady. Richmond S. Clark can be reached at the Humble Oil and Refining Company, P.O. Box 3807, Baytown, Texas. James R. Cudworth, Dean of the College of Engineering, University of Alabama, has a new home at 1 Hickory Hill, Tuscaloosa, Ala. Ed Delany has moved from Chestnut Hill to a new home at 8 Welgate Circle, Wollaston 70, Mass. John J. Healy, Jr., also has a new home at 4406 McPherson Street, St. Louis 8, Mo. Arthur E. Raymond's home address is now 73 Oakmont Drive, Los Angeles, Calif. John J. Winn, Jr., Manager of the Port of Portland, can be reached at Swan Island, Portland, Ore. New address have also been received for Maurice Gerin, Llewellyn B. Griffith, Eugene A. Hardin, L. George Horowitz, Colonel Kenneth M. Moore, Rollin F. Officer, Alan Osbourne, Harold C. Pickett, Richard C. Poole, Laurence B. Richardson, Arnold C. Rood, Edgar S. Russell, Hugh D. Seaver, Kenneth B. Skardon, Colonel Harold E. Smyser and Aaron A. Tushin.

Stanley L. Scott, a major general, now heads the Engineer Center, Ft. Belvoir, Va. General and Mrs. Scott have two sons, William, who was graduated from M.I.T. in 1944, and Gilbert, a West Point

graduate. Herbert B. Loper has been promoted from brigadier to major general. His home is in Arlington, Va. Ralph S. McDowell, a naval captain, is assigned to the U.S. Navy shipbuilding liaison office in Italy. Robert R. Neyland, a brigadier general and retiring head coach of the Vols, the University of Tennessee football team, was honored by the All American Sports Show program of the National Broadcasting Company on the day he was given the highest award of the Football Writers Association at the Chicago tilt of the College All Stars vs. the National Professional team. The program dramatized his own athletic prowess at West Point, where he played football with President Eisenhower, and his outstanding achievements as a coach. He served in both World Wars and is the holder of the Distinguished Service Medal, the Legion of Merit with Cluster, and the grade of Officer in the Order of the British Empire. Governor Clement of Tennessee proclaimed last August 18 as General Neyland Day. Bob's physicians advised his retirement as coach but he remains at Tennessee as the athletic director.

The John Mattsons and the Franklin Flahertys may well be proud of the performance of two Technology undergraduates. Melvin R. Mattson '54 and Franklin T. Flaherty, Jr., '56, are on the Dean's List for the 1953 spring term. Lee M. Silverstein, son of Saul and Mrs. Silverstein of Manchester, Conn., was married to Doris S. Cramer of Portsmouth, Va. Philip T. Coffin, Jr., son of Phil and Mrs. Coffin of Mt. Lebanon, Pa., was married to Harvene L. Fulton of Mt. Lebanon. George Chutter phoned to say that Rufe Shaw and his family have completed another world tour, this time including an auto safari in central and south Africa, as well as visits to India, Kashmir, Tibet, Hong Kong and the Philippines. Sincere sympathy is extended to Jim Hotchkiss on the passing of his mother.

Edmund S. Whitman has been appointed director of public relations of the United Fruit Company with headquarters in New York, according to an article in the *Christian Science Monitor* sent in by Warrie Norton. Ed has been with United Fruit since 1921 and is the author of numerous books and magazine articles. Glenn Stanton, President of the American Institute of Architects and member of that select group of prominent 1921 architects in Portland, Ore., was a recent speaker before Wilmington, Del., architects. Glenn is a member of the Construction Industry Advisory Committee for the National Production Authority as well as a member of the State Department's Advisory Committee on Fine Arts. Thomas F. Murphy of the Patent Office, Washington, headed one of a series of forums on government services to business at Mellon Institute of Industrial Research, Pittsburgh. Glenn H. Easton, a naval captain, has become vice-president of J. J. Henry and Company, New York City. A naval constructor, he also spent three years with the U.S. Maritime Commission, during which he organized and directed more than 70 sea trials for all types of merchant vessels. Three members of the Class are active on committees of the American Institute of Electrical Engineers. Phil Hatch is a member

of the Board of Examiners and vice chairman of the Committee on Land Transportation. Whit Spaulding is a member of the Management Committee. Liz Gatewood is a member of the Committee on Marine Transportation, chairman of its Subcommittee on International Standardization and member of the Subcommittees on Wire and Cables, Distribution, and Communications and Alarms.

It is with profound sorrow that we record the passing of three members of the Class and extend sincerest sympathy to their families. Spencer Walter Butler, engineer with the Ford Motor Company since 1949 and builder of the Ford foundry and engine plant in Cleveland, Ohio, died there on May 26, 1953. Born in Cleveland on July 11, 1898, he prepared for Technology at the Glenville High School and Case School of Applied Science. A member of Beta Theta Pi, Theta Tau and the Mining Engineering Society, he was graduated with us in Course III. He had been associated with the Selas Corporation of America, Philadelphia, in engineering and sales. Surviving are his wife, Hortense; a daughter, Mrs. Gloria Merkle, and his mother, Mrs. Albert N. Assmus.

Stuart Nixon, engineer with Sealed Power Corporation of Muskegon, Mich., for the last 18 years, died suddenly on June 9, 1953, shortly after his return from a business trip. Born in Boston on October 14, 1897, he prepared for the Institute at Detroit Central High School. At M.I.T., he was general manager of Tech Show 1921, "The Purple Dragon," a member of Lambda Chi Alpha, Osiris, Theta Tau, Masque, Corporation XV and the Institute Committee. He was graduated with us in Course XV and joined the Studebaker Corporation of Indiana before going to Continental Motors Corporation, Muskegon, in 1923. He was western district sales manager when he transferred to Sealed Power to become, successively, service engineer, technical engineer and research engineer. He developed and patented a spring expanding device for piston rings which is widely used and considered an important improvement in the ring manufacturing process. He was a member of the American Society of Mechanical Engineers and on the Executive Committee of its Oil and Gas Power Division; active in the Society of Automotive Engineers, and had recently led a number of forums for the American Oil and Gas Society. He had written many articles for technical magazines and was nationally recognized as an authority in the internal combustion engine field. He is survived by his wife, the former Annetta M. Peterson; a daughter, Margaret, aged 11; a son, John Stuart, aged eight; two brothers, John, of Detroit and David, of Hartford, Conn.; two sisters, Mrs. Donald B. Ward of Detroit, and Miss Jessica Nixon of Cleveland, Ohio. We are indebted to Mrs. Nixon and to Harmon B. Deal²⁰ for aid in preparing these notes.

Sidney Featherman died on July 1, 1953. Born on July 19, 1900, he prepared for M.I.T. at Natick High School. At Technology, he was a member of Tau Delta Phi, the Chemical Engineering Society and Corporation XV. He engaged in chemical engineering until 1927 when he

started the Quality Cleansers and Fur Storage Company in Framingham, Mass., and headed the firm until his retirement in 1951. He had since been a consulting engineer in Boston. Besides his wife, Ethel, he leaves a son, Alan, who is 16 years old; a daughter, Barbara Ann, who was graduated from Wheaton College last June and is now attending Harvard Graduate School of Arts and Science for a master's degree; his father, two brothers and two sisters. We wish to acknowledge Mrs. Featherman's assistance in providing data for this article.

The best of all good wishes to you for a most enjoyable Thanksgiving. — CAROLE A. CLARKE, *Secretary*, Federal Telecommunication Laboratories, 500 Washington Avenue, Nutley 10, N.J.

• 1922 •

The following members of the Class were present on Alumni Day last June: Abrahams, Appel, Berry, Robert H. Brown, Chittick, Dimmick, Chatani, Warren Ferguson, Whitworth Ferguson, Gens, Godard, Grover, Horovitz, Hyland, Abbott Johnson, Keenan, Miller, Marjorie Pierce, Rosengard, William W. Russell, Seegal, Stose, Teeter, Terkelsen, Thomson, Thulman, Ulbrich, Vaupel, Wing, Riley, Sherbrook, Pratt and Webb. Before the dinner at the Statler we gathered in Whit Ferguson's room to fortify ourselves against the approach of the after dinner speakers. No casualties were reported.

Brod Haskell resigned from his position of vice-president of the Guaranty Trust Company and on June 1 became vice-chairman of Combustion Engineering, Inc., of which company he had been a member of the Board of Directors and the Executive Committee for the past 10 years. Earl Heitschmidt continues active in architectural circles on the West Coast. He has been speaker at numerous meetings of the American Institute of Architects and at present is president of the California State Board of Examiners. Robert D. Stuart, Jr., last spring was appointed Woonsocket Division Manager of the Blackstone Valley Gas and Electric Company of Rhode Island. John W. Poole is chairman of the department of science and mathematics at John Muir College in Pasadena. Poole, formerly head of the West Coast Division of the government's office of scientific research and development, was appointed last spring to preside over the technical group of the Citizens' Committee on Air Pollution in Los Angeles. The Committee's work will include the study of existing regulations against air pollution caused by petroleum refineries, steel mills and other manufacturing plants and industrial and domestic incinerators. *Ryerson Steel Pictorial*, the house organ of Joseph T. Ryerson and Son, Inc., shows a picture in issue No. 37 of an all steel dredge built by the Puget Sound Bridge and Dredging Company named the *H. W. McCurdy* in honor of our classmate. Crawford H. Greenewalt was given the degree of Doctor of Laws by Columbia University last June. Kenneth M. Vreeland's insurance business known as K. M. Vreeland Company has been compelled because of expanding operations and increased personnel to

move to larger quarters at 75 Pearl Street, Hartford. Prior to establishing his own company five years ago, Vreeland was assistant U. S. manager of the Scottish Union (at a guess, an insurance company). Vreeland lives with his wife and son at 19 Brenway Drive, West Hartford. Al Kruse had the honor of escorting Glen Stanton, president of the American Institute of Architects, on a tour of Wilmington, Del., when Mr. Stanton was in that city last spring to speak to the Delaware Chapter of Architects. And speaking of architects, last spring Bertram A. Weber was made a fellow of the American Institute of Architects.

The May issue of *Southern Power and Industry* contains a very interesting article by Crawford H. Greenewalt entitled "Dynamic Business—Our Best Guarantee of Progress" relating principally to the damaging effect our tax laws have had on financial incentive.

Most of the Class probably know by now of the death of King Crofton last April, but for those who haven't heard the sad news, he died of cancer at the age of 52. King at the time of his death was district sales manager of the Rochester and Pittsburgh Coal Company and the United Eastern Coal Sales Corporation. He had been active in the Boy Scouts of America and had served on the board of the Family Service of Rochester. During World War II, he worked for two years in the Men's Volunteer Corps at Strong Memorial Hospital in Rochester. He is survived by his wife, a son and daughter.

On the brighter side, William B. Elmer was married last June to Miss Cathleen Burns of Boston, a graduate of Abbot Academy, Smith and Boston University Graduate School. Following a wedding trip to Quebec, they have taken up residence in Boston. And as a little side line on past events, the *Republican* of Lynn, Mass., reports that Dwight Gray, who died in 1944, at which time he was vice-president of Pope and Gray, manufacturers of printing ink, left a net estate of \$155,345.

New addresses: John W. Kellar, Partridge Road, Duxbury, Mass.; Professor J. Robert Wolf, Kansas State College, E. E. Department, Manhattan, Kansas; Allen Wescott, Shields, Va.; David P. Oatman, R.F.D. 2, West Valley, N.Y.; Ashley G. Knight, Hughson, Calif.; Edward L. Ford, 14 Gould Street, Newport, R.I.; Earl T. Heitschmidt, 848 South Madison Avenue, Pasadena 5, Calif.; Seymour H. Hemenway, P.O. Box 230, Meadville, Pa.; Commander Paul S. Johnson, 65 Lupine Avenue, San Francisco, Calif.; Charles E. Mawry, Ascutey Hill Farm, Windsor, Vt.; William Schulman, 57,36 Ridgedale Road, Baltimore 9, Md.; Charles W. Boughton, Middlebush, N.J.; Jean E. Friedlander, 135-27-225 Street, Laurelton, N.Y.; Colonel Abraham G. Silverman, c/o Mrs. I. W. Jacobs, 4504-28th Street, N.W., Washington, D.C.; Dr. Roland D. Clapp, Cumberland Foreside, Me.; Lawrence W. Coddington, 98 McCosh Road, Upper Montclair, N.J.; J. Lincoln Dodson, R.F.D. 3, Shickshinny, Pa.; Adrian J. Gildardi, 18024 15th Street, N.W., Seattle, Wash.; Broderick Haskell, Combustion Engineering Company, 200 Madison Avenue, New York City; Harry R. Kim-

ball, 354 Fletcher Drive, Arberton, Calif.; Harold J. LeCour, 729 15 Street, N.W., Washington 5, D.C.; W. Ramsey McIver, 2030 Empress, South Pasadena, Calif.; Randall W. Meech, 414 Sherman Avenue, Frederick, Md.; James R. Morton, 6909 Ayr Lane, Bethesda 14, Md.; Reverend Burton G. Robbins, Whitten Street, Amesbury, Mass.; Miss V. Devereux Van Akin, 792 East Ama Pamu, Santa Barbara, Calif.; George A. Watt, 308 Carnation Avenue, Corona Del Mar, Calif.; Colonel Olaf P. Winningstad, Whitthorne Drive, Milan Arsenal, Milan, Tenn.—C. YARDLEY CHITTICK, *Secretary*, 41 Tremont Street, Boston 8, Mass. WHITWORTH FERGUSON, *Assistant Secretary*, 333 Ellicott Street, Buffalo 3, N.Y.

• 1923 •

Fifty-five members, 29 wives, and five children assembled at the Sheldon House, Pine Orchard, Conn., on June 11–June 13, for a highly successful 30th-year Reunion. Honored guests were Dr. and Mrs. Compton and H. E. Lobdell '17. The Committee under Channing Clapp as General Chairman, ably assisted by Messrs. Bond, Chamberlin, Fleischer, Golding, Greenough, Hayden, Hooper, Howland, Johnson, Kattwinkel, Pennypacker, Russell, Shaw, Skinner, Tremaine, and Zimmerman, had the arrangements so well organized that the success of the affair was assured from the start. The accommodations on the shore of Long Island Sound and the excellent meals contributed much to the enjoyment. Many members who could not come sent their regrets—the principal reasons being graduation of children or baby-sitting with grandchildren.

Besides the opportunity for renewing old acquaintances and fighting the Battle of the Charles again, some of the highlights were Pete Pennypacker's remark on the Treasure Hunt—"I never saw the Class so dumb before," the quartet singing, a tribute to Lobdell (we couldn't tell whether his tears were anguish or sentiment), the distribution of numerous beautiful prizes, Bond's remark on how the Class looked to the Secretary and a remark from the floor on how the Secretary looked to the Class, Eddie Schmitz' rendition of "At the Sign of the Three Brass Balls," from Tech Show 1920, the excellent movies of graduation and other reunions and Dr. Compton's tribute to a Class outstanding in its energy and resourcefulness.

At the business meeting which was intermingled with the reunion banquet at Pine Orchard, the Class selected a new set of officers for the 1953–1958 five-year term, consisting of the following, the names of whom were presented by the Nominating Committee headed by E. E. Kattwinkel: John H. Zimmerman, President; David W. Skinner, Vice-president; Howard F. Russell, Secretary; Wentworth T. Howland, Assistant Secretary; Lyman L. Tremaine, Treasurer; George A. Johnson, Alumni Council Representative. Gifts were presented to retiring President Shaw and Secretary Bond in a spontaneous expression of appreciation for the excellent job they had done in guiding the destinies of the Class for the past 30 years. Expressions of thanks also went to the other

officers of the Class and to the Reunion Committee.

Starting Thursday evening, the 11th, the Reunion broke up Sunday morning, the 13th. Many of the members then proceeded to Boston for Alumni Day on Monday, where a total of 60 assembled for luncheon in the Court or for the banquet at the Statler, or for both. At the banquet the Class gave a rousing cheer for Horatio Bond, the new President of the Alumni Association. Both affairs broke up with the members looking forward to the next reunion and the possibility of having get-togethers more often.

Ollie Hooper as Treasurer of the Reunion Committee, has turned over to the new Treasurer, Lem Tremaine, the surplus remaining after all the expenses were paid. If our finances will stand the strain, a complete report on the Reunion will be prepared and sent to the active members of the Class. In the meantime, this resumé will serve as an interim report. Those attending at Pine Orchard for all or a part of the affair included: Ben Albert, Alan Allen, Mr. and Mrs. Edward S. Averell, Mr. and Mrs. Jack Beretta, Mr. and Mrs. Horatio Bond, Jim Brackett, George W. Bricker, Leonard J. Brooks, Mr. and Mrs. H. Bruson, Mr. and Mrs. C. V. Chamberlin, Mr. and Mrs. Channing Clapp, Phil Coleman, Ben Cooper, Roger Cutting, Mr. and Mrs. W. Dietz, Mr. and Mrs. Thomas Drew, Henry B. duPont, Mr. and Mrs. R. M. Goetchius, H. B. Golding, W. B. Greenough, Mr. and Mrs. Earle A. Griswold, Frank Haven, Mr. and Mrs. H. L. Hayden, Mr. and Mrs. L. L. Holmes, O. L. Hooper, W. T. Howland, R. J. Hull, Abbott L. Johnson, George A. Johnson, Dave Joy, Mr. and Mrs. David Kaufman, Mr. and Mrs. R. C. Kleinberger, C. M. Mapes, Mr. and Mrs. Peter V. Martin, B. A. McKittrick, Walter A. Metcalf, Ed Miller, J. J. Murphy, J. C. Nowell, Jr., Mr. and Mrs. Harold Pearson, Miles Pennypacker, James Pennypacker, A. S. Redway, I. Robinson, Mr. and Mrs. George A. Rowen, H. F. Russell, J. W. Sands, R. P. Shaw, D. W. Skinner, Mr. and Mrs. A. A. Spiliotis, Mr. and Mrs. Royal Sterling, Mr. and Mrs. J. Stratton, Scott V. E. Taylor, L. L. Tremaine, A. Williams, J. H. Zimmerman.

On Alumni Day some others, not at Pine Orchard, turned out; among them were: R. D. Brown, H. M. Chatto, M. N. Clair, R. T. Colburn, A. W. Davenport, C. H. Ducote, H. S. Ferguson, Joseph Fleischer, E. L. Greenblatt, A. R. Holden, E. E. Kattwinkel, F. F. Lange, H. A. Lockhart, W. N. Murray, B. E. Proctor, G. Putnam, E. C. Rue, S. S. Setchell, R. H. Smith, A. C. Stewart, C. P. Swaine, S. V. E. Taylor, L. J. Tracy, A. M. Valentine, S. E. Whitcombe, E. W. Willis, Preston Woodling, Isadore Robinson, L. R. deLuzuriaga, P. S. Rice and C. T. Burke.

Congratulations and best wishes go to Ray Bond for his election as the new President of the Alumni Association. Congratulations from the Class also go to R. L. Bowditch as the President of the U. S. Chamber of Commerce, to Dr. B. E. Proctor, the new Head of the Department of Food Technology at M.I.T., and to John E. Burchard, Dean of Humanities at the Institute who was awarded an honor-

ary L.H.D. degree at Union College on June 14.

It is with regret that we report that Harold B. Golding disappeared on an airplane flight between Managua, Nicaragua and San José, Costa Rica on July 17, along with George R. Blodgett, a Boston attorney and an experienced pilot. While an extensive air search has been undertaken, no clue has been uncovered at this writing. Golding was one of the most faithful members of the Class in attending Alumni Days and Reunions.

Ida (Adelburg) Webster, IV, was featured in the *New York Journal American*, July 11, as the "Woman of the Week." After four years at the Institute and one year in Europe, she made the first step in a successful career by work on the Dutchess County home of Mrs. Roswell Miller, daughter of Andrew Carnegie. In World War II she was regional director of the Building Services for the U.S.O. Today, she is director of the Citizens Housing Council and a member of the firm, Edelbaum and Webster, New York City.

Herbert A. Barnby is director of the Packaging Research Division of Owens-Illinois Glass Company. His son, Donald, is a student at the Institute—Milton E. Parker is consulting food engineer, director and professor of food engineering at the Illinois Institute of Technology. His son, Bryan, graduated from the Institute in August—William S. LaLonde, Jr., could not attend the Reunion because of the engagements at Conventions of the American Society of Civil Engineers and the American Society of Engineering Education in Florida and California—Arthur L. Carvill has just been named Manager of Electric Utility Field Sales of the General Electric Company, operating out of Lynn, Mass.

Robert C. Sprague, Chairman of the Board of Sprague Electric Corporation, and President of the Associated Industries of Massachusetts, has been appointed a director of the National Shawmut Bank in Boston—Walter A. Metcalf has been named vice-president in charge of operating services for Stop and Shop, Inc. at Boston. During World War II he served first in the Navy as a lieutenant commander and later in the Army as colonel where he acted as section chief on General MacArthur's staff, receiving the D.S.C. in 1945—Lawrence T. Haugen, former Chief Engineer for the U.S. Pipe and Foundry Company has been promoted to Head of the Department of Engineering of the Birmingham, Alabama, plant.

In June, changes in the Civil Aeronautics Administration transferred William H. Weeks '31, Head of the Aircraft Engineering Branch at Kansas City to Washington as Head of the Division. At the same time, Waldemar A. Klikoff, who was formerly Head of the C.A.A. Aviation Safety Division in Los Angeles, was named Deputy Chief—Edwin M. Shultes has been appointed Head of the newly established Legal and Patent Department of the General Electric Chemical Division at Schenectady—Kilburn M. Smith, Assistant Planning Engineer of the Commonwealth Edison Company at Chicago has been transferred to the grade of

Fellow in the A.I.E.E., "For Contributions to the Field of Power System Engineering, particularly in the pioneering of high voltage transmission of bulk power in the densely populated areas."

John E. Burchard was elected Vice-president of Humanities by the American Academy of Arts and Sciences at its Annual Meeting in Boston. Our old friend, Horace S. Ford, was elected treasurer of the same institution.

Remember that your Secretaries do not make news—they only report it. Please send in notes regarding your activities so that the other members of the Class may throw out their chests in pride at your achievements. — HOWARD F. RUSSELL, *Secretary*, Improved Risk Mutuals, 15 North Broadway, White Plains, N.Y. WENTWORTH T. HOWLAND, *Assistant Secretary*, 480 Walnut Street, Newtonville 60, Mass.

• 1924 •

News certainly piles up during the summer. Seems as if you fellows were doing more and at the same time more willing to let your Secretary know about it. Makes a happy combination. First of all, a line about our, believe it or not, 30th Reunion. Next June will see it. George Knight, who's been active in some capacity on every reunion we've ever had, is the chairman. Won't go into details here, since it will all be spelled out in a letter you will receive sometime this fall. Just save the week end of June 11-June 13 now, on suspicion. Last June, appropriately enough, 24 of us showed up for Alumni Day. In what has become a most enjoyable custom, the Schoolers threw a cocktail party at the Statler before the banquet. Got things off to a fine start. As usual Bill MacCallum planned his business trips properly, and again won the long-distance prize. Also there from some distance: Dave Meeker from Troy, Ohio; Clint Conway from Baltimore; and Johnny Henninger from Reading, Pa.

Missing from Alumni Day, but swearing he's going to plan things to make next year's go, was Hank Simonds. From the cards that have been floating in from our Deep Six Sailor, it's going to take some planning. Here's the latest sequence: May, Canal Zone; June, something called Ras Tanura in Saudi Arabia with a blank space on the card "picturing the beauties of this place"; July, Saseho, Japan; and August brought a picture of a couple of Okinawan dancers doing a classical dance, all very proper. "Got run out of here by a typhoon. Went 400 miles away and let it blow—100 m.p.h. where we were. Came back three days later." By the way, in case you have an uncontrollable urge to get away from it all, Hank's ship carries a very limited number of passengers, four if my memory is correct. Chance of a lifetime to see the world, accompanied by the chief engineer on the guitar.

This column really should have begun with the most startling announcement of the month. Our almost-the-last-dyed-in-the-wool bachelor has thrown in the sponge. Phil Cohen has taken the fatal step. It happened on September 13. The bride, Miss Irene Shaughnessy. Well, he

certainly held out a long time. Suppose by now most of you have read Quentin Reynolds' *The Amazing Mr. Doolittle*, either in book form or in the *Reader's Digest* version. Reviews have been universally good. For an Army man, Scoops Reinhardt seems to appear with amazing frequency in the *U. S. Naval Institute Proceedings*. His latest, as coauthor: "Mediterranean Theater: The Iron Curtain By-Pass." Hailed editorially as "A Worcester Achievement," Dr. Hudson Hoagland's Foundation for Experimental Biology has just completed an \$80,000 building. And Dr. Hoagland must have had a particular thrill from the award of an \$18,000 three-year grant for cancer study to his son, Dr. Mahlon B. Hoagland, named by the Cancer Society, "Scholar in Cancer Research."

Among recent honors: Martin J. Buerger, elected a member of the National Academy of Sciences; Dimitri Trone of Brazil, a fellow of the American Institute of Electrical Engineers; former Senator Baylock Atherton (that's ex-honorable, not dishonorable) received, for the second consecutive year, the National Quality Award, "one of the highest honors which the life insurance fraternity can bestow"; Colonel Walter H. Kennett, first and so far only commander of Bowdoin's R.O.T.C. unit, received the honorary degree of master of arts at Bowdoin's commencement; J. Earl Frazier, made an honorary member of Keramos, scholastic honorary fraternity of ceramics; Charles A. Thomas, made an honorary member of Phi Lambda Upsilon, honorary chemical society; under heading "Waltham Doctor Elected President," George P. Swift elected national president of the American Electroplater's Society; John T. Blake, awarded the Charles Goodyear Medal for 1953 "for outstanding contribution to rubber chemistry"; and Candelario Calor Mota, awarded the degree of doctor of engineering by, if we're not mistaken, the University of Madrid. Quite a clutch of honors for one issue.

A few new positions to report also. Since March, Bill Correale has been acting director of New York's Bureau of Construction (school). On July 1 he was confirmed as head of the Bureau. Bill will direct a major program of school construction throughout the city. From Deepwater, N.J., comes the announcement that H. Clifford Bailey has been appointed superintendent of TEL. That's DuPont-short for their Tetra-Ethyl Lead "A" Unit. And Jack and Heintz announced late last spring that S. Floyd Stewart had been appointed to the newly-created post of assistant to the president. Before joining this fabulous concern Floyd had been with American Bosch in their Arma Corporation. The release went on to say that his principal job will be new product planning. Got any good inventions in mind?

A note from Bill Robinson says that he ran into Tom Bundy on the train recently. Tom heads New York sales for the Hauserman Company. His partitions are not competitive with Nate Schooler's. Matter of fact they've worked together on several jobs, including the U. N. buildings. Bill was just back from a West Coast junket. He's now much involved in planning for Light's Diamond Jubilee. It

comes up next year, but he's not going to let it interfere with reunion.

Suppose you saw that recent *Saturday Post* story on solar energy with Hoyt Hottel's portrait prominently displayed. National Science Foundation sponsored a conference on the subject in September, with Hoyt one of the featured speakers. George DiSomma reports on an impromptu New York "welcome home" dinner for the newly-returned doctor of engineering, Calor Mota. For a mid-summer spur-of-the-moment affair they had a very good turnout, almost all of them civil engineers. Moving spirit, says George, was "none other than the partition mogul and great guy, Nate Schooler."

Lots of other notes here, but we don't want to overcrowd this issue—besides, we'll need some for next month. A new year of the Alumni Fund has begun, and Frank Shaw has high hopes that this year, our 30th, you'll all make a little extra effort. It would be nice to come up with a \$30.00 average by next June. Last year we averaged \$21.50, so that's not much of a jump. How about it? — HENRY B. KANE, *General Secretary*, Room 1-272, M.I.T., Cambridge 39, Mass.

• 1925 •

In beginning the new Review year, the class representation at the alumni affairs last June should be reported. Fifteen classmates were present at the campus activities as well as at the Alumni Banquet. For the record they were: Robert C. Ashworth, Jr., II, Samuel H. Caldwell, VI-A, W. S. Colby, I, Fred J. Duncan, VI, F. L. Foster, III, Samuel Glaser, IV, David Goldman, VI, Robert Hodson, II, James H. Howard, II, Edwin E. Kussmaul, VI-A, Henry F. McKenna, Jr., Edward D. McLaughlin, I, Frederic M. Rice, I, Avery H. Stanton, XV, and Walter N. Westland, I. Having learned from the 1952 experience that with Sam Glaser leading the class cheering, it was not in the best interest of many of the classes to have 1925 in the balcony. This year our table was located on the floor of the Hotel Statler. Sam again led the cheering although the Alumni Association tried to split us up by providing only one table with 10 places for the 15 who appeared.

A considerable amount of class news has accumulated during the summer, and it is impossible to include all of it in this report.

A very nice letter has come in from Max King, I, in which he gives information about other members of the Class but quite modestly says little about himself. In May he attended the Fourth Industrial Engineering Conference at West Virginia University in Morgantown, W. Va. The program indicates that Max, Chief Engineer, The Homer Laughlin China Company, Newell, W. Va., was moderator of one of the technical sessions. Also on the program was Joe Manuele. He discussed the subject of quality control, a field in which he is a leading authority. When Joe graduated in Electrical Engineering, he went to work for Westinghouse with the thought of staying for a year in their training course. He has been with the company ever since. In 1930 he was assigned to the Headquarters Inspection Office where his work must have attracted considerable

attention, as Westinghouse, when later establishing the department of quality control made Joe its director. Max states that Joe is a frequent contributor to a number of technical journals and has presented papers before many of the professional societies in this field of quality control which he has pioneered. It was largely through his efforts that the American Society for Quality Control was organized in 1946. Max also ran into Rufus Palmer a few months ago and reports that Rufus has left the Mellon Institute where he had been doing research work and has since invented a magnetic separator for granulated materials designed to operate on materials of minute magnetic properties. He is now in business for himself in the manufacture and sale of this equipment at 476 Broadmoor Avenue in Pittsburgh.

You may remember that I went fishing for some further information on Harrison Browning's change of address a few months ago and as I expected Harrison crashed through telling me that, "In 1948 my family came here for their health. I ran back and forth between here and Cleveland for three years spending most of my time in Cleveland. I finally decided to do it the other way and spend most of my time here. But you have to have something to do. I know nothing about cotton or cattle or copper, so decided to stick to my business and we are making small gears and small machine parts here. All for aircraft. I get back to Ohio Gear Company about three to four times a year for two or three weeks at a time and the rest of the time spend in this country where the sun shines 85 per cent of the time that it should."

Various newspaper articles have provided the remaining information for this month. I believe it had previously been reported that M. P. O'Brien, I, Dean of the College of Engineering, University of California, Berkeley, has accepted a position as consulting engineer to the General Electric Company's Aircraft Gas Turbine Division while on leave from the University and in his new assignment will review the new engine development program now being activated by the General Electric Company. After receiving his B.S. at M.I.T. in 1925, he did graduate work at Purdue University and the Royal College of Engineering, Stockholm, Sweden. In 1928 he joined the staff of the University of California as a professor of mechanical engineering. He is the author of *Applied Fluid Mechanics* and numerous trade articles.

We note also that Douglas B. Martin, XV, sales manager of the Amplex Division of Chrysler Corporation has been promoted to the position of vice-president in charge of sales. He has been associated with Amplex for 20 years and since 1945 has been sales manager.

An article in the *Jamaica, Long Island, New York Press* gives George F. Chapline, XVI, quite a write-up in connection with the Firebee drone plane propelled by the Fairchild J-44 jet engine which is an entirely new concept of jet engine construction developed by Fairchild engineers making it possible to build the bantam-weight engine with the heavy weight performance. Chapline is quoted as the

spokesman for his employer, the Fairchild Corporation, and his qualifications are as follows: "Chapline is an executive with some awareness of military problems. A graduate of the U.S. Naval Academy at Annapolis, he saw action with the Navy in both World Wars. At one time, he was a gunnery officer aboard the battleship *Arizona* which was sunk at Pearl Harbor, and during World War II he served as a captain on the staff of Fleet Admiral Nimitz. He has some awareness of aviation problems, too, having won his wings at Pensacola in 1920 and commanded a Navy squadron in 1921. . . ."

The *New York Times* reports that George L. Washington, II, has been designated by the United Negro College Fund to conduct a study of possible new areas of co-operation between the 31 member colleges of the organization. Mr. Washington has held teaching and administrative positions at several negro colleges.

Last June it was announced that Karl R. Van Tassel was appointed general manager of the Knolls Atomic Power Laboratory, a component of the atomic products division operated by the General Electric Company for the Atomic Energy Commission. He previously was general manager of the laboratory's operating department.

You will all be interested to know that Fred Greer's son, Fred, Jr., '52, was married last June in the Congregational Church in Peterborough, N.H., to Miss Barbara Jean Lloyd of Peterborough. Many of you will remember the Reverend John Fitzsimmons who spoke at our Class Reunion in 1950. He assisted at the ceremony.

As a final item, I am sorry to report the death on May 17 last, of Thomas O. Richards, I, head of the executive engineering department, Research Laboratories Division, General Motors Corporation. He was a native of Montclair, N.J., and entered the General Motors organization in 1923 as a technical clerk in the Cadillac Motor Car Division. In 1925 he was transferred to the General Motors research laboratories and later was named assistant secretary of the new devices subcommittee, a group of G.M. divisional representatives assigned to study inventions and new devices. In 1937 he was made head of the laboratory control department of G.M. research and was given his last post in January, 1953. He is survived by his wife and two sons to whom we extend condolences from the Class of 1925.—F. LEROY FOSTER, *Secretary*, Room 5-105, M.I.T., Cambridge 39, Mass.

• 1926 •

The first issue of notes in the fall always presents the problem of selecting what to use from the mass of material that has come in during the summer. Since we eventually use everything, the problem boils down to using that which will be out of date if it is not used promptly. With three months of no notes we should have had this issue ready weeks ahead of the due date but that would violate every known law of human nature. Furthermore, we found sailing, which we took up last year, to be even more fun after win-

ning a few races, and it is also a very time consuming sport.

We would like to report on everyone's activities during the summer but instead we have decided to give you the story of one classmate who really took a trip. We reported in our last issue that Ben Richardson had written us for Dick Plummer's address but merely assumed that Ben was making a trip to Mexico. Instead he and his wife really went on a junket. Since it may give some of the rest of us an idea or two we will highlight the trip with excerpts from an article in the *Electrolux Factory News*, the paper published by the plant where Ben works in Greenwich, Conn. Ben's junket consisted of a 15,000-mile, two-month trip, which carried him as far north as Alaska and south to Mexico. In all, the Richardsons passed through 28 states of the United States; Alaska, Mexico, three Canadian provinces and one Canadian Territory. Ben estimates he traveled over 10,000 miles by auto and covered the remaining 5,000 in side trips by bus, train, ship and plane. "This," says Ben, "was the key point in the entire journey. This variety in methods of travel broke up the monotony. We drove, rode airplanes and steamers, and drove again. We also stayed in hotels, motels and occasionally camped out overnight. All the changes made the trip so much more interesting. We had no long grinds of hundreds of miles in the car or boring long trips on planes and boats. It's also interesting to note, during the entire trip we had only three days of rain and three days of really hot weather."

Here is a brief outline of the route the Richardsons took and the things they saw. Leaving Old Greenwich the Richardsons drove through Pennsylvania down through North Carolina, Georgia, Alabama on through Mississippi to New Orleans into Texas. They left the car in San Antonio and hopped a plane for Mexico City where they stayed for a week. While in Mexico City the Richardsons went to the Opera House, visited the Taxco silver mines and saw a bull fight. Ben managed to see Dick Plummer for a short visit in Mexico City but the rest of the trip he was moving too fast to contact classmates. Flying back to San Antonio they picked up the car and traveled across Texas stopping at Big Bend Park, located on the edge of the Rio Grande. On they went, viewing the Carlsbad Caverns on the way to Phoenix. The Grand Canyon, Bryce Canyon and Zion Park all saw the Richardsons. From Las Vegas they went past the Hoover Dam, across the Mojave Desert to Bakersfield, Calif., after which a trip to Sequoia and Yosemite National Parks preceded their arrival in San Francisco. Ambling along up the west coast they arrived in Olympia, Wash., a couple of days ahead of schedule and took a side trip to Victoria, British Columbia, before leaving the car in Seattle to take the boat to Alaska.

From Juneau a one-hour hop by plane brought them to Skagway. From there they then went via narrow gauge railway over the mountains to Whitehorse, Yukon Territory; flying from there to Fairbanks, Alaska. Visiting McKinley National Park they saw many wild animals including caribou, grizzly bears and

Dall sheep, that came surprisingly close. Back to Fairbanks for an eight-hour plane trip to Seattle where they picked up their car and started east. Past the Grand Coulee Dam, down to Virginia City, Yellowstone and Denver through Illinois, Detroit, Toronto, the Thousand Islands and Montreal, from where it was a very short hop to their Vermont farm and home to Old Greenwich, Conn. I know Gordon Spear will be interested in reading about the Richardson safari because the Spears enjoy extended motor trips.

While on a business trip to Wilmington, Del., in July your Secretary stopped in and had a nice visit with Howard Humphrey and have since had a fine letter from him. We stopped in at the Wilmington Trust Company to see George Edmonds but he happened to be in Canada on a fishing trip — I believe he goes there every year with his boys.

I have not yet reported on Alumni Day last June when we had one of the largest turnouts in any off-reunion year we can recall, there being 26 men present. Those present were Martin J. Bergen, Frederick P. Broughton, Robert S. Chidsey, Allen L. Cobb, Basil G. Constantine, Laurence G. Cumming, Donald S. Cunningham, Robert T. Dawes, Robert C. Dean, Alfred H. Dolben, Charles S. Draper, Anthony P. Gabrenas, Natale Gada, Edgar M. Holmes, I. Austin Kelly, III, James R. Killian, Jr., Benjamin Margolin, Earl C. McMahon, Stewart S. Perry, C. Marvin Pickett, Jr., Chenery Salmon, George Warren Smith, Cedric M. Thompson, Abraham White, John B. Wilbur, Cedric Valentine. Before the main banquet we had a private gathering of the Class, one that will long be remembered by your Secretary. 'Twas a great day! It was especially nice to see so many of the Class this day because none of the Class showed up at Pigeon Cove this summer. I kept beer in the refrigerator all summer long and left instructions with Ruth to get out my steins for any member of the Class who should arrive while I was out in the bay Saturday or Sunday afternoons. It must be that a lot of classmates were zooming around the country like Ben Richardson. For example, we had hoped that Austin Kelly would be able to drop by in his ketch but on August 31 we received a letter from him from which we quote: "I was sorry not to be able to stop in and see you en route to Maine, but in order to spend my three weeks cruising in Maine I had one friend take the boat up and another bring it back."

Note that Austin says "take the boat up" which is proof as we all know that he is not a New Englander (he's a Kentuckian) for here we always say colloquially "down Maine" or "down East." The explanation is nautical because in the old days of sailing vessels they sailed "down wind" to get to Maine since prevailing winds are from the southwest. Yesterday these winds prevailed from the southwest in gale force for our last race of the season, an invitation affair at the Eastern Point Yacht Club in Gloucester. My crew was skippering, since I had a much more important engagement. In one of the puffs he was hauling so hard on the tiller to keep his course, that it broke and he went overboard backwards. Before

his crew members could get the sails down they crashed another boat, and I am driving over shortly to survey the damage. Had it not been for my more important engagement I would have been at the tiller and being over twice the age of my crew, the dunking would not have been the lark that it was for him. Instead, therefore, of being catapulted into the Atlantic, Ruth and I were attending the wedding of Jim Killian's daughter, Carolyn.

This memorable event took place in the walled garden of the President's House on Memorial Drive in Cambridge at 4:30 in the afternoon of September 12. When we entered the garden Ruth was escorted on the arm of a handsome young usher. As the guests came into the garden they gravitated to its outer edges and organ music filled the air. Shortly before the strains of Lohengrin began, the guests moved en masse to the edges of the aisle that had been arranged down the middle of the garden. I was deeply impressed by the bridesmaids' yellow gowns.

Mrs. Killian, who is the most perfect hostess I know, made the perfect bride's mother dressed in gray with a most becoming blue hat. The smoothness with which everything moved in such a large wedding reflected her excellent planning. Jim radiated that he was the proud father of the bride; he really beamed. He has every reason to be proud, for Carolyn is such a fine young lady and made such a beautiful bride. I'll have to admit that my tear glands reacted a bit as they walked down the aisle together. The wedding service was performed by the pastor of the church the Killians attended when they lived in Wellesley, Reverend William Brooks Rice. An impressive part of the ceremony was the recital of the Lord's Prayer by everyone in the garden. The groom, Paul Robert Staley, appeared far more composed than the average young bridegroom. He looks like just the type of man you would want your own daughter to marry. He graduated from Dartmouth in 1951 where he was captain of the football team. He is now a second year student at Harvard Law School. After the ceremony we followed the receiving line into the house where an orchestra was playing popular tunes. Upon extending our good wishes to the bride and groom we returned to the garden for refreshments. It was a very happy wedding. — GEORGE WARREN SMITH, General Secretary, E. I. du Pont de Nemours and Company, Inc., 140 Federal Street, Boston, Mass.

• 1927 •

Well, here we are back at our reporting desk after a busy summer which included some fun, some hard work and some very hot weather. Now that most of us have had our vacations and are back at work, I will bring you up to date on the activities of your classmates.

C. Wesley Meytrott has been elected an assistant vice-president, sales, Consolidated Edison Company of New York, Inc., and will handle governmental contracts for the company. Since the war Wes has been closely associated with the company's sales to government agencies.

A recent inquiry about a change of address has brought the following news from Frank G. Kear: "My business activity at the present time is chiefly concentrated on assisting new television stations to get on the air. This is a full-time job. We are still living in Chevy Chase and I have managed to build a summer home at Split Rock in the Poconos and have spent my spare time this summer in fixing it up and landscaping it."

The Class of 1927 was well represented at the Alumni Day activities on June 15 — Dwight C. Arnold, Alf K. Berle, Joseph C. Burley, Ed Chase, James F. Collins, A. J. Connell, H. E. Edgerton, Harry E. Franks, Alfred W. French '26, Lawrence B. Grew, Fred H. Kienle, Jim A. Lyles, F. Marcucella, Hector A. Moineau, Ezra F. Stevens, Philip N. Rugg, Bill L. Taggart, Jr., and Mario A. Volante.

Mr. Ernest H. Dodge writes to tell us that he has moved to Springfield, Mass., as division plant superintendent in Long Lines Department of American Telephone and Telegraph Company. They have moved into an old Colonial house in Wilbraham, 8½ miles from the offices. "Our two girls, 11 and 14, are looking forward to snow, winter sports, and so on. The younger one doesn't remember anything about the winter. . . ."

Glenn D. Jackson spent the month of July in Europe visiting Dusseldorf, Frankfurt, Zurich, and London. During his stay he rented a car and toured Holland, Germany and England visiting different suppliers of machinery and color for the textile industry. One week was spent in Switzerland including a train ride up the Jungfrau. France was omitted from his tour due to anticipated strikes. Returning on the plane he met Robert S. Hatch (more about him later on). Together they saw the sun rise over Iceland and later on the same day saw the sun rise again over Boston. "One of the most interesting things I noticed in Germany was the almost complete motorization. Everyone seems to own a motor bike or a motorcycle. This was not true of Holland where everyone rides a bicycle."

George Saliba, Box 500, Paramus, N.J., has called to say he has a couple dozen steins still left. The *Textile Bulletin* of Charlotte, N. C. makes the following announcement: "Frank Stubbings has resigned as manager of the Dublin, Va., finishing plant of Burlington Mills Corporation and reveals that he plans to open his own business in the near future. He hopes to locate headquarters for his company in the Pulaski, Va., area."

Albert T. Both, former research assistant in metallurgy at the Chase Metal Works, Waterbury, Conn., has been appointed works manager of the Cleveland branch of the Chase Brass and Copper Company.

"Markets Are What You Make Them" was the subject of an address by James T. Chirurg, President of the Boston and New York advertising agency which bears his name, before the annual convention of the New England Heating and Plumbing Association at Bretton Woods. He reviewed current industrial conditions and trends with particular emphasis on the prospect for New England business for the immediate and near future.

An article in the New York *American Metal Market* informs us that Fordyce Coburn, executive of the Colorado Fuel and Iron Corporation, has been honored at a testimonial dinner for his contributions to community safety and welfare in Wharton, N. J., where the corporation's Richard Ore Mine is located. The dinner was given by the Richard Mine Employees' Union and Community Club in the White Meadow Lake Country Club at Rockaway, N. J. Mr. Coburn was recently appointed district manager of Colorado Fuel and Iron and received this annual tribute in recognition of his notable contributions to the well-being of the whole mining community.

Mr. Charles L. MacLaughlin, who has been superintendent of gas production for eight years, is now superintendent of gas operations for the New Bedford Gas and Edison Light Company where he has served successively as gas engineer, superintendent of gas production and supervisor of all the local company's gas operations.

The Public Relations Department of Standard Oil Development Company has announced the appointment of James K. Small as manager of the Patent Division of the Standard Oil Development Company, central research and engineering affiliate of Standard Oil Company (New Jersey). He will be located in the Elizabeth offices of the company. After leaving M.I.T. Mr. Small attended New York University where he obtained his Jurist's Degree in Law in 1934, and was admitted to the New York Bar in 1939. He is a member of both the New York and New Jersey Patent Law Associations, the American Chemical Society and Alpha Chi Sigma.

A recent news bulletin from the Army Home Town News Center, Kansas City, Mo., gives us the latest news on Army Lieutenant Colonel Frank G. Wise of San Francisco: "... was recently awarded the Bronze Star Medal at a ceremony in Japan. Colonel Wise was cited for meritorious service as commander of the 70th Transportation Truck Battalion in Korea from August '52 to June '53. He is now in the Supply Section at Far East Army Headquarters in Yokohama. His wife, Constance, and son, Peter, are now en route to Japan to join him."

Early in August Herbert M. Houghton of Calgary, Alberta, was in town and called to say "hello." Since I was away on a trip at that time, I did not talk with him.

It is with regret that we record the deaths of two of our classmates. The first, J. Stuart Crandall of Lexington, Mass., who passed away after a five-day illness on July 20. He was internationally known as a port engineer and had superintended much dry dock construction in other countries. He was a member of the United States delegation to the International Congress of Navigation at Brussels, Belgium, in 1935, and was formerly a visiting lecturer at Harvard on port engineering.

William J. Ottersberg passed away on August 7 after a long illness, at a Nashua, Mass., hospital. Since 1951 he had operated his own machine works in Milford, N. H. — JOSEPH S. HARRIS, *General Sec-*

retary, Shell Oil Company, 50 West 50th Street, New York 20, N. Y.

• 1928 •

Your appreciation of this column will be enhanced if you will imagine at least 410 members, wives, children of ex-professors of your Class singing the following parodies of M.I.T. songs as they did at the 25th Reunion Shore Dinner in Morss Hall of Walker Memorial on June 14. The new words (and the original song) are by our adopted Bud Wilbur of the Class of 1926. Sung to the tune of *Sons of M.I.T.*: "But now the years have rolled away to Nineteen Fifty-Three/And with our wives and children, we've come back to M.I.T./Throw out your chest! Pull in that paunch! Ignore that shining pate! For we are still of the grand old Class of Nineteen Twenty-Eight!"

And then the following was sung to the refrain of *Take Me Back to Tech*: "Back with the Class of Twenty-Eight, at the glorious Institute,/For our Twenty-Fifth Reunion and a technological toot!/ To all our physical, quizzical profs, our greetings and all that!/For how we love to be again, on a scientific bat!"

Of unusual note were the almost universal and voluntary expressions of approval from individual members of the Class, their wives and families for this first "On Campus" Reunion at M.I.T. In the first place we found that the M.I.T. site had in itself been a bigger attraction to many, than a mere summer hotel.

As expected, we broke our previous record (91) by over 30 per cent with a final total figure of 146 classmates. In addition we had 91 wives, 79 children over 10, one husband, one mother, and one mother-in-law — making a record Reunion attendance of 319 people.

Comments of amazement and delight were generally expressed by almost every '28 man as well as by their families. In the first place, no one who had not worked on the Cambridge Reunion Committee was quite prepared for the de luxe river-side views and wonderful modern equipment of our quarters at the new Baker House. This had everything a crack vacation hotel has, plus a lot more — and it is at M.I.T.! Next came the surprise of the other new additions to M.I.T. No longer is the Great Court covered with cold grey pebbles — now it's a beautiful campus with lush grass, fully grown trees and immense flowering rhododendrons. At night, with impressing lighting, this Great Court walk is most unusual and impressive. The Class was also delighted with the new Sloan Industrial Management Building and its sixth floor Faculty Club dining rooms, lounge, and reception rooms.

Through our Reunion publicity you have all had copies of the 25th program. So we will not repeat it here, but on behalf of the Class we should like again to record a great vote of thanks to Bill Carlisle, our 25th Reunion Chairman, for the very outstanding job that he, Ralph Joep, Jim Donovan, and the Cambridge Committee did to assure success to this biggest of all class events.

The third verse of *Sons of M.I.T.* contains these lines: "Once more thy sons, Oh, M.I.T., / Return from far and wide, /

and gather here, once more to be, / Renourished by thy side." There is the simplest explanation of the great success of 1928's 25th Reunion — we were "Renourished by thy side" as were the wives and children we brought with us. This benefit was the great bonus of the "On Campus" idea which we sincerely hope the Class of 1928 has successfully pioneered at the Institute.

Special mementos of this Reunion, which were under Ralph Joep's charge, included a special 25th Reunion stein for all who attended the Stag Banquet at the Sloan Building. We were "knee deep" in memories with O. B. Denison's 11 Tech smoker songs, his rendition of the hit songs of 1924 through 1928 and with Bill Bendz' 5th, 10th and 20th Reunion films plus Dry Wit Benny Hough's illustrated stories describing class members in compromising poses. Other mementos included '28 ash trays given at the Wives' Dinner before their trip to Pops, monogrammed '28 hats for everyone, '28 Reunion program booklets, song sheets, '28 name badges, '28 Lobster Dinner bibs; programs (with list of 130 faculty guests) and instructions on "How to Eat Maine Lobsters."

An excellent class picture was taken on the steps of Sloan Building and the entire gang of over 300 appear quite photogenic — grouped on the steps around the large 25th Reunion banner. You may obtain a copy by sending \$1.65 to M.I.T. Photo Service, Room 3-017, M.I.T., Cambridge 39, Mass.

We must save some superlatives for the 144-page *Class Report* published for the Reunion. Walt Smith was chairman and Herm Swartz was editor with both getting a big assist from Ralph Joep. This *Report* covers everyone in the Class from whom a report and picture could be obtained. It includes the names and current addresses of everyone in the Class, along with over 400 individual and personally prepared reports, nearly 200 photographs of classmates, several pages of snapshots, accounts of previous reunions, committees and other information about our Class. It's a marvelous record and a perfect way to learn more about '28 men near you, in your line of business or just to catch up with the doings of the guys "you knew when." One sobering page in this *Report* contains 62 names which appear under the "In Memoriam" title. Four of these classmates died as casualties in World War II.

These '28 *Class Reports* (bound in cardinal and grey) cost between \$8.00 and \$10.00 each, but I'm told you can still get one for \$5.00 if you will send that amount to Walter J. Smith at 209 Waverly Street, Arlington, Mass. If you haven't a copy, you are missing the best '28 record since *Technique*.

In addition to the usual get-together events of any Reunion, our 25th had many, very different features. One was the beautiful water carnival and ballet with music. Championship and comedy diving exhibitions were also included before the Class and their families were invited to use the new alumni pool. Other features were the guided tours of M.I.T. and sight-seeing tours of old Boston —

the latter in modern new sight-seeing busses.

There was a boat ride on the Charles River following the Shore Dinner and supervised sailing for those qualified at the M.I.T. Sailing Pavilion. Other events included a special all Tech Show performance, slides of "Alaska," Professor Schwarz' show on "Textiles of the Future," Professor Davis' exciting show "Techniques of Fire Control" and M.I.T.'s new feature film entitled *Men of Science*.

For the teen-agers we had a Dads-Kids softball game which the Dads were lucky to win 14 to 12, special movies, a square dance, informal record dances, and a visit to the Boston Science Museum.

Of great inspiration was Professor Erwin Schell's 12 talk "Life Begins at the 25th" in which he pointed out that our Class had reached that period when our greatest values could be reached by leadership, co-operation, group stimulation, and the judicious use of our knowledge and experiences.

Notable also were Dr. Compton's remarks to the Class about the Corporation's work and the changes that had occurred in the past 25 years. Dr. Killian '26 also showed by a few comparisons the tremendous change between today's Institute with its \$42,000,000 annual budget and that of 1928 with a \$3,000,000 budget. Dr. Killian referred to certain undergraduate high lights and accomplishments of our Class and spoke of the contributions of '28 men to M.I.T.'s Faculty and administration. He singled out our President, Ralph Joep, for particular commendation as Director of the Development Fund and our Reunion Chairman, Bill Carlisle, for his fine work as head of Student Personnel at M.I.T.

Dr. Killian then announced that 1928 had made a total class gift of \$85,885.22 — \$75,885.22 going into the Class of 1928 Endowment Fund, income only to be used for general purposes, and \$10,000 to be used for research.

Finally, may Ralph Joep and I take this occasion: First, to thank the Class for the beautifully engraved sterling silver cigarette boxes and, second, may we again thank the 25th Reunion Committee on behalf of the Class, for a job superbly done.

In addition to those already mentioned, there were several other Committee Chairmen who gave long and effective service to the Reunion: Jim Donovan headed Finance, Dance, Registration and Hospitality Committees and really outdid the beaver. His wife Frances and Florence Joep were cochairmen of the Ladies Committee. Bill Hall and Abe Woolf were cochairmen of the Shore Dinner. Bob Harris was chairman of sports and Art Nichols was chairman of the swimming. Slim Maeser was "Mr." Transportation and Thurston Hartwell handled the boat ride. The Buffet Luncheon was Rudy Slayter's charge, the bar problems fell to Dave Mathoff, and Roland Earle took charge of the Class Banquet. Jack Chamberlain was the chairman of a most effective Children's Program Committee.

Now, for the record, here are the names of the 1928 men and women who had the pleasure of establishing the first "On Campus" Reunion at M.I.T. Date June 12

through June 15, 1953. Frances and Gilbert Ackerman; Elva and Walter Anderson and Warren; Arnold A. Archibald; Betty and Maynard Babb; Max Bearon; Marjorie and William Bendz and Walter; Rose and Maurice Beren and Jean; Ruth and George Bernat with Eliot and E. Robert; Ethel and Carl Bernhardt; Helen and William Birch with Dagmar; Clara Jane and D. Yancey Bradshaw; Sydney and Sidney Brown with Jay; Ruth and Donald Buckner with Phyllis; Ethel Mae and Henry Buntschuh with Charles and Robert; Blanche and Montague Burgess; Homer A. Burnell; Arthur Campopiano; Lucille and Vincent Caputo with Carol Ann and Audrey; William H. Carlisle; John Carvalho; Ruth and Christopher Case; Norton Case; Eleanor and John W. Chamberlain with Jeanne; Marie and George I. Chatfield; Mary Ann and Dudley Collier with Robert; Gertrude and Joseph Collins; John P. Connelly; Mariano Contreras with Cecilia and Fernando; Dorothy and Robert Cook; Barbara and Robert Crawford; James Cullen; Chester M. Day; Alice and Victor Decorte; Martha and Starke Dempewolf; Gabriel and Helen Disario with Caroline; David Donovan; Frances and James Donovan with Andrew and James; Catherine and John Draper; Beryl and Huyler Ellison; Amy and James Farnum; Newton S. Foster; Gertrude and George Francis; Martha and Donald Fraser with Donald and Malcolm; Joseph Gaffney; Dorothy and Lazare Gelin; Ellen and Lawrence Glassman; Richard B. Goble; Dorothy and Carney Goldberg; Ella and William Gorfinkle with Barbara Ann and Priscilla; Jo and A. J. Garcia with Janet and Judith; Joseph Guertin; Sally and William Hall; Roberta and Edward Halligan; Wi son T. Hammond; Virginia and Robert Harbeck with Marjorie and Richard; Harold Harrington; Helen and Robert Harris; Ethel and Thurston Hartwell; Percy Emory Harvey; Roger W. Haven; Ames B. Hettrick with John and Ames, Jr.; Walter E. Hildick; Frank Horn; Marjorie and Benjamin Hough; Kiki and John Houpi with Basil and George; Janet and George Hubbard; Terry A. Hurlbut; Florence and Ralph Joep with Roxanne and Deborah; Adrienne and Arthur Josephs; Elizabeth and Robert Joyce; Donald S. Kennedy; Bess and Maxwell Kessler; Alice and William Kirk with George, William, Jr., and David; Mary and Peter Kirwin with Thomas; M. H. Klegerman; Alfred C. Knight; Carl J. Kohler; Madeline and Mark Kolligian with Eunice and Tanya; Gertrude and Henry LaCroix with Jacqueline; Robert R. Larson with Mrs. Robert R. Larson, Sr., wife and child; Lillian and Thorwald Larson with Robert and Linda; Everard Lester; Charles E. Lyons with Richard; Alice and Mieth Maeser with Doris; George N. Mangurian; Dora and David Mathoff; Beatrice and John Melcher with Holly and Jill; Louis C. Miller with Carolyn; Henry Moggio; W. Bion Moore; Helen and Robert Murphy; William J. Murphy; W. S. McClinthic; Marjorie and Franklin McDermott with Patricia and Robert; Betty and Gerard MacGillivray with Elizabeth Ann and Kenneth; Frank McGuane; Josephine and Kenneth J. MacKenzie; Mary and Arthur Nichols with Louise and Latham;

Frederick A. O'Brien; Gladys and David Olken with Kenneth, Neil, and Louise; Mary and Noel Olmstead; Adele and Walter K. Oser and Mrs. John Guiliot; Maxine and Karl Otte; Harlan C. Paige; Anne and George Palo; Gerard V. Patrick; Helen and Alva Pearsall; Ruth and Kenneth Peterson with Donald; Gladys and William Phillips with Geoffrey; Claire and Theodore Pierce; Gertrude and Edgar Pitt with two children; Dorothy and Edward Poitras with Edward; Madeline and Harold Porter with John; Marguerite and John Praetz with Linda; Robert J. Proctor; Ruth and James Rae with James, Barbara Ann and Richard; Louise and John Reynnders; George H. Reynolds; Betty and Claude Rice; Helen and Charles Richheimer with Adele; Joseph D. Riley; Richard Roth; John K. Rouleau; Richard B. Rubin; Mary and John Russell, Jr.; E. M. Shiepe; Nathalie and Desmond Shipley; Pamela and Rene Simard; Verna and Rudolph Slayter with Sandy; Katherine and Walter Smith with Janet; Margaret and Charles Southwick with Donald and Benjamin; Donald M. Sturmickle; Dorothy and Hermon Swartz and son; Richard H. Titherington; Alexander Tsongas and wife; Susan and James Tully; Grace and James Ure; Joseph Whitcomb; Katherine and James White with Georgeanna and Lucille; James G. Willett; Walter H. Winchell and son; Robert T. Wise and Thomas; Edith and Raymond Wofford; Ruth and Abraham Woolf with Michael and Stephen; Velma and Charles Worthen.

Both Ralph and I are delighted to announce in this issue that Walt Smith who with Herm Swartz "sparkplugged" the *Class Book* has agreed to work with me on the Secretary's duties. With Walt in Cambridge and with me in New York, we hope to give the Class better coverage on notes in the months ahead. Even though our 25th is now history, let's keep the Review column filled. It is the best substitute for a reunion invented to date. Send your letters to me in New York, to Ralph at M.I.T., or to Walt at the address below. — GEORGE I. CHATFIELD, *Secretary*, 49 Eton Road, Larchmont, N.Y. WALTER J. SMITH, *Assistant Secretary*, 209 Waverly Street, Arlington, Mass.

• 1932 •

Summer was no vacation for your Secretary as the returns from our class questionnaire of last spring kept the mails busy. I must say the results are very gratifying to your officers. There is lots of interest, both in our own Class and in the Institute. We are planning to follow up in an effort to get 100 per cent return and then consider seriously the possibility of putting out a simple class directory. Quite a few have expressed interest in this. Let me hear from any others that would think the effort justified.

Both Rolf Eliassen and Tom Sears have written enthusiastically on the good time the small group had that attended Alumni Day. There were 10 present: Rolf, Tom, Frank S. Chaplin, Russell C. Pratt, George K. Kerisher, Edward Nealand, William B. Pearce, Russell S. Rokensch, Thomas T. Amirian and James L. Mackernan. While Tom thought we had comparatively good

representation considering that this Alumni Day fell between reunions, he does hope that in another year it will be possible for us to have a larger turnout, particularly from those members of our Class who live near Boston. Will put a reminder in next spring's notes. Those who were there thought it very worthwhile, not only for the program, but for the opportunity to see other people at the Institute, particularly those of other classes.

Rolf reports that Larry Grady, XVI, dropped in to visit with him during the summer. Larry had been with the American Chiclé Company in New York City for eight years and had risen to the position of assistant to the vice-president in charge of production. Apparently Larry tired of New York, as some do, and found an opportunity to return to his home ground in New England as director of industrial engineering of the New England Confectionery Company, almost right across the street from M.I.T. Larry has found a home at 35 Sagamore Avenue, West Medford.

Rolf also reported a visit with Zeke Boling en route with his attractive family of wife, two daughters and a son, for a week's vacation in Halifax, Nova Scotia, before taking over the duties of president of Bush Manufacturing Company, West Hartford, Conn., which had just merged with his previous concern, the Heat-X-Changer Company of Brewster, N. Y. Rolf would seem to consider this a fine life for an executive, but I know from his own correspondence that he spent most of the summer at his summer cottage at Lake Sunapee, N. H., so it looks to me as though there is something we industrialists have to envy in our professorial classmates!

I have heard again from Al Mulliken, whom we all enjoyed seeing at the 20th Reunion. Al lives at 1316 Chestnut Street, Western Springs, Ill., and is a special representative, Food Department, and war projects engineer for the Creamery Package Manufacturing Company in Chicago. He married Elizabeth Lombard of Radcliffe shortly after leaving college and they keep to the class average with four children, two boys and two girls. Al has been very active in civic work with the Red Cross and Community Chest, is past director of Chicago M.I.T. Club and currently educational counselor for M.I.T. at Downers Grove High School.

I have had a letter from Jack Osterman, who promises faithfully to come to our 25th Anniversary. Jack lives on Hamilton Lane in Darien, Conn. He is now with American Telephone and Telegraph, after transferring there three years ago from New York Telephone Company, where he had been since college. His activities as staff engineer, center around new services and wider use of existing services, which take in quite a considerable area.

We have found two very substantial citizens amongst the list of graduate students listed with the Class of '32. Glenn Poorman has been appointed general manager of the Supply Department of Esso Standard Oil Company, succeeding H. J. Nichols, Jr., in that capacity and as chairman of the Tankage and Inventory Committee and member of the Committee for Staff Departments Management Development Program. Glenn took his master's in

1932 after graduating from Dartmouth. He worked his way up, first with Standard Oil Company of Louisiana, transferring to the parent company in 1944. Glenn lives in Short Hills, N. J.

Our other man of note is John B. Calkin, now assistant to the president of Foster D. Snell, Inc., chemical consultants. John has long been a well-known consultant in the pulp and paper and chemical process industries, with a long list of professional achievements to his credit; an author on a wide range of subjects and a notable contributor in the fields of colloid chemistry, chemical engineering, commercial chemical development and historical research. With his wife, Ruth W. Lichty, a Mount Holyoke graduate, he lives with their four children at 124 Main Street, Orono, Me.

Maurice Triouleyre joined the Shawinigan Resins Corporation, Springfield, Mass., this July as procedures analyst. Maurice has been active in the M.I.T. Club of Connecticut. He was formerly with the Wico Electric Company and filled in his spare time by instructing evenings in Cost Accounting at Western New England College. He lives with his wife, Gertrude R. Martin, and two children at 80 Hawthorn Street, Longmeadow.

Fred Mader has made the news by election as president of the M.I.T. Club of Central Massachusetts. Fred lives at 15 Park View Lane, Shrewsbury, Mass., and is a fire protection engineer, Inspection Department, for the New England Fire Insurance Rating Association. Fred reports that he tries his hand at all trades to keep a 25-year-old house and fairly extensive grounds in reasonably presentable condition. He and his wife have two children, Sandra A., 13, and Bradley F., eight.

John Leslie has been having his hands full as Chief, Military Construction Branch, New England Division, Corps of Engineers. He has been in charge of engineering and military program of upwards to \$100,000,000 for each of the last three years. His major projects have been the Limestone, Portsmouth and Westover Air Force Bases and four veteran hospitals. He and his wife, Elizabeth M. McLucas, have three children, Alan Craig, 10, Stephen Kent, five, and Christine Debra, three.

I have many more items of interest, but think I have used up a reasonable amount of space and will hold them for future copy. — ROBERT B. SEMPLE, *Secretary*, Box 111, Wyandotte, Mich. *Assistant Secretaries*: WILLIAM H. BARKER, 45 Meredith Drive, Cranston, R. I.; ROLF ELIASSEN, Room 1-138, M.I.T. Cambridge 39, Mass.

• 1933 •

For those of you who attended the 20th Reunion at Wentworth-by-the-Sea in June, this reminder will prompt pleasant thoughts about a thoroughly enjoyable week end. For those of you who were not able to get up to Portsmouth, this will hopefully serve as a reminder that you should not fail to get to our next gathering. Your Secretary is preparing a summary of the Reunion activities which will be sent to the entire Class later this fall.

Starting with this issue your Assistant Secretary has undertaken the job of pre-

paring the class notes. If you come to Cambridge and don't visit this office, you do so at your own peril. In any event please plan to send word periodically, bringing us up to date on the latest developments in your personal and professional life.

Don Fink, now Director of Research at Philco, described the technical aspects of the National Television Systems Committee's color system at a recent meeting of the I.R.E. in San Francisco. Thus Don continues to demonstrate that he stands in the forefront of radio and television development in this country. Word has come that George E. Hughes (now a colonel) was recently welcomed as deputy district chief of the Springfield Ordnance District. George recently returned from Korea. He has been an officer in the regular Army since 1946, though he served with distinction in the Army starting in 1940. George is now living in Longmeadow, Mass., with his wife and five-year-old daughter. Robert W. Timbie will move to Pensacola, Fla., as senior mechanical engineer of the projects and standards department of the Chemstrand Corporation. A new nylon manufacturing and processing center is now under construction there.

Word has also come that Francis B. Vaughan has been appointed as manager of the application research section in the Polychemicals Department of DuPont located at the experimental station in Wilmington. He will be responsible for directing research on finding new application for such plastics as "Hypalon" and "Teflon." Francis has been with DuPont since 1933. During the war he served for a time at the University of Chicago as a research associate on the Manhattan Project and later continued in various supervisory positions in the Clinton laboratories at Oak Ridge and Hanford. The Vaughans have three daughters and live at 208 Brecks Lane in Wilmington. Gordon Bunschaft, chief designer for Skidmore, Owings, and Merrill, was here at the Institute recently in connection with the design of a major laboratory building. Dick Fossett stopped in for lunch with the Reunion Committee in mid-July and discussed some of the ways in which our next Reunion could be even more successful — of which you will hear much more later. For a man who has spent several years in Texas, Dick looked very comfortable in the Cambridge atmosphere. — GEORGE HENNING, *Secretary*, 330 Belmont Avenue, Brooklyn 7, N.Y. ROBERT M. KIMBALL, *Assistant Secretary*, Room 24-105, M.I.T., Cambridge, Mass.

• 1938 •

We regret to report the death of John Iglauer who was deputy city manager of Grand Rapids, Mich. John was also editor of the *Journal of the Michigan Municipal League*. He leaves his wife, Harriett, and two children, Carol, eight, and Bruce 5.

I am sure the members of the Class who attended our 15th Reunion will join your Secretary in announcing to the rest of the Class it was an excellent affair. Of course, the sports enthusiasts will be ready to admit that the weather in Lenox could have been improved upon, but I feel that it served to hold the group

together and give everyone a chance to renew a large number of acquaintances. I suspect that you will hear more of the Reunion before the year is out.

We had the privilege of electing class officers for another five years. We are fortunate to have Lou Bruneau as Class President and he is to be commended for the splendid job he did as reunion chairman. He came to Boston several times during the year to get his committee functioning and the Reunion reflected the time and effort he spent in making it a success.

The new by-line to these notes announces your new Secretary. Some of you know that the job is not entirely new to me for I have been assisting Al Wilson at the job for the past two or three years. The Class also elected four assistant secretaries and I hope that they will consider the office more than a title. They are: Frederick J. Kolb Jr., 211 Oakridge Drive, Rochester 12, N.Y.; Richard Muther 116 West 67th Terrace, Kansas City, Mo.; Harold H. Strauss, 3175 South Sepulveda Boulevard, Los Angeles 34, Calif.; Wenzel M. Wocho, Jr., 628 St. John Street, Elgin, Ill. Fred and Dick you will recognize as having been re-elected to their positions.

Dale Morgan continues as Treasurer, and in case anyone feels the treasury needs refurbishing (a point of fact) Dale's address is: Carbide and Carbon Chemical Corporation, 30 East 42nd Street, New York 17, N.Y. We are fortunate to have Bob Johnson as our new Class Agent. I would like to make one nomination of my own — Don Severance as Honorary Secretary. We have been greatly indebted to him for supplying information for these notes, and knowing Don, I am sure his contributions will continue.

We have a stack of cards elicited by Lou Bruneau in promoting the Reunion. The authors of these bits of information with their notes are as follows: William F. Whitmore: "I'm being sent overseas after all; leaving on March 19 for six months assignment to the First Marine Air Wing in Korea. Third son added to family: Thomas Sherman Whitmore on February 10." M. E. Tolman: "Now Administrator of Rumford Community Hospital, Rumford, Me. Married — twins, Bruce and Judy, five years old." C. R. Scalingi: "Still Director — Research and Development of Daisy Manufacturing Company — makers of Daisy Air Rifles." Vincent Salmon: "Moved from Chicago in 1942 to become Manager, Sonics Section, Physics Department, Stamford Research Institute. As a hobby, have a sound recording business." B. S. Old: "Am on leave of absence from Arthur D. Little, Inc., to serve as President of Cambridge Corporation, a jointly owned affiliate of Little and Carrier Corporation of Syracuse, N.Y." Carl W. Maynard, Jr.: "Am celebrating 15th year with DuPont Company this year. Continue to follow M.I.T. news with much interest. Best of luck on the Reunion." L. Carle McEvoy, Jr.: "Sure wish I could join you. But a growing business is worse than a growing baby. Regards to the rest of the Class." J. Cranston Heintzelman: "My five daughters, 13, nine, twins five, and one three keep me quite well tied down!" C. J. Donlan: "Still with Langley Aero-

nautical Laboratory of National Advisory Committee for Aeronautics. Bill Nelson, J. Garvin, J. Kotzchik — all '38 — also at Langley." Yale Brozen: "Served as consultant to the President's Materials Policy Commission last year. Will address the National Society for Business Budgeting in May at its Milwaukee meeting on Forecasting and Business Budgeting." Robert R. Fisk: "Will be getting ready for permanent change of station — maybe Germany, maybe Korea." Jim Gilliss: "Still working for the superintendent of the Steel Hull Division of the Newport News Shipbuilding and Dry Dock Company." Norman W. Stewart: "Now working at Heald Machine Company, Worcester, Mass."

We also have a batch of news releases which have accumulated during the summer. Frank Atwater has been promoted to assistant works manager of the Fafnir Bearing Company. Frank was formerly industrial engineering manager. John Cooney is in the news again. The Vocaline Company of America, which John with his brother and two others started three years ago, has passed the million dollar sales mark. The company sells the Vocatron, a small wireless intercommunications set.

Henry T. Mudd, vice-president and general manager of the Cyprus Mines Corporation, has been elected a director of California Bank. He is also chairman of McClintock Manufacturing Company, director of the Calaveras Cement Company and the State Mutual Savings and Loan Association, trustee of Claremont Men's College and a member of the board of fellows, Claremont, College. Other appointments and promotions include: Charles Burchard as director of architecture of A. M. Kinney, Inc.; Robert G. Bowie as assistant manager, government sales division, Eastman Kodak Company; Archer S. Thompson as administrative assistant, Central Division, Pittsburgh of Liberty Mutual Insurance Company; Paul L. Morton, professor of electrical engineering, University of California, as chairman of the Division of Electrical Engineering; and Edward Gray as assistant to the general manager of the work and aircraft division of the White Motor Company in charge of the division's production.

Robert B. Mancib, who is a captain in the Air Force, was in the news last spring, being credited with the saving of the lives of 11 crewmen when he crash landed his disabled B29 at Hickam Field in Honolulu. The bomber landed on its left landing wheel and nose wheel, pancaked and veered from the runway without catching fire. The plane was en route from San Francisco to the Far East.

We had a phone call from Dick West recently. Dick has his own company — West Instrument Corporation in Chicago. He produces pyrometers and industrial temperature measuring devices. Don Macdonald reports from Turkey that he expects to be back in Cambridge studying Japanese this fall. He has been attached to the American Consulate in Istanbul.

We had a telegraphic style note from Walt Kaufman last spring indicating he is secretary of both the Wire Rope Techni-

cal Board and of the Manufacturer's Sub-Committee. He is also active in the American Petroleum Institute. His children are Margaret, eight and Elizabeth, four.

The best we can do from Will Roper and Bill Gussow are address changes. Lieutenant Colonel Roper is now in the office of Chief of Army Engineers, Washington. Gussow is now reporting from 3661 6th Street, S.W., Calgary, Alberta.

Dave Beaman's engagement was recently announced. His fiancée is Cornelia Jane Lawrence of Poughkeepsie, N.Y. She was graduated from Vassar and has been active with the Red Cross during the war and with the U.S. Dept. of Health and Welfare. — DAVID E. ACKER, *General Secretary*, Arthur D. Little, Inc., 30 Memorial Drive, Cambridge, Mass.

• 1939 •

Reservations have been made for the week end of June 12-June 13, 1954, at the Snow Inn, Harwich Port, on Cape Cod's southern side. Having made tentative arrangements with the Snow Inn proprietors, the Thompsons, earlier in the summer, my wife and I drove down to visit the Inn during the Labor Day week end. From what we saw there, we are convinced that all '39 men will enjoy an extremely pleasant Reunion.

The Snow Inn property is located right at the water's edge and beside the channel entrance to a beautiful tiny harbor. Therefore, it offers a wonderful beach and a chance to enjoy boating, both on the location of the Inn. It is a private beach with ample beach house facilities which include a sizable recreation room for a Saturday night party. Their own dock on the channel gives access to the following for those who enjoy boating: a 40-foot auxiliary schooner, an amphibious "duck," and a power boat for fishing. All three vessels are included in the rate.

Back ashore, the several buildings of the Inn line the water's edge and enclose one of the smoothest putting greens to be seen. Between the green and the beach house are three shuffleboard courts. For the golfers who wish to do more than merely demonstrate prowess at putting, guest privileges are extended by all of the leading golf clubs on the Cape. Greens fees are not included in the rate, I might add.

When mealtimes come around, the Inn will really make you sit up and take notice. Many choices appear on each menu, prepared by one of the best chefs on Cape Cod. The rate for all this? Fifteen dollars each day for each person, all tips and hotel extras included, although not including the Reunion's registration fee. For the budget-minded, putting away \$10.00 a month from now on in will approximately cover the accommodation expenses for you and your wife. Just be sure to give the money every month to your wife: she'll be sure to keep it safely because she wants to come too!

Manning Morill, now at Cedar Rapids, Iowa, has promised to act as a headquarters for gathering information on the western contingent of the Class who expect to attend our 15th. In subsequent direct mailings, other information and details and those who are coming will be published.

Start now to line up friends or relations to care for the youngsters, and let's plan to be together in June of '54. — **GEORGE BEESLEY, Secretary, Angier Products**, 120 Potter Street, Cambridge 42, Mass.

• 1940 •

With the coming of cool weather once again it is time to prepare this column. Norma, Eric (alias Ricky to his friends) and I traveled over 4,000 miles on our vacation. As a tune up we went to New York and back. Then down to Fulton, Ky. From Fulton we went to Brookhaven, Miss., for a few days and returned to Fulton again before going home. We were so tired of loading and unloading Ricky's playpen (which served as a bed on the trip) that we drove straight through from Fulton to Bethesda at the end of the vacation. It took us about 21½ hours to complete the 900-mile journey.

With a cute and original card Virginia and Ray Keyes announced the arrival of Courtney Allen Keyes at 1706 Jaynes Street, Berkeley, Calif., on August 6, 1953. By the time this column reaches you Virginia and Ray will undoubtedly have imbibed deeply of the pleasures of parenthood. Although this was an off year, 13 members of the Class were present on Alumni Day. Those attending were Richard Berry, Robert Bittenbender, Jack Downhill, Samuel Goldblith, John Gray, Leslie Higgins, Richard Mac Paul, John Piotti, Jr., Lucius Taylor, Phelps Walker, Marshall Wight and Arthur Willis.

Two of our classmates at Du Pont have received promotions. Frank Shackelford has been named to the newly created post of assistant sales development manager for the Rubber Chemicals Division. Previously he was sales manager for "Freon" fluorinated hydrocarbon propellents of the "Kinetic" Chemicals Division. Ed Cooper has been promoted to general laboratory director in the Research Division of the Polychemicals Department. Claude Shannon, who is with the Bell Laboratories, exhibited a maze solver at the annual meeting of the National Academy of Sciences in Washington last April. Scott Brodie, who formally was with American Viscose Corporation, has been appointed engineer in the process assistance section of the yarn technical department of the Chemstrand Corporation at Pensacola, Fla. Lester Lees has been appointed associate professor of aeronautics and applied mechanics at the California Institute of Technology. Les has been associate professor of aeronautical engineering at Princeton where he was in charge of hypersonic and supersonic research projects. He also is co-editor of *Laminar and Turbulent Flow*, volume four of a series on high-speed flight and jet propulsion to be published shortly by the Princeton University Press. Colonel Asher Robbins, Jr., was graduated from the Industrial College of the Armed Forces in Washington last June. Colonel Robbins received his master's degree with us. Leo Raniard has resigned as research director for the carpet division of Alexander Smith Inc.

Bill Green, who is one of five owners of the Western Hills Hotel in West Fort Worth, Texas, has guided the design and

construction of the world's first officially designated heliport established by a hotel. I am sure Bill will be glad to see any classmates who happen to be flying low in the vicinity of Fort Worth. Don't forget to send in your class dues (\$2.50 for five years) and above all don't forget to drop Al a line or two during the coming year. — **ALVIN GUTTAG, General Secretary**, 7814 Marion Lane, Bethesda 14, Md. **MARSHALL D. MCCUEN, Assistant Secretary**, Oldsmobile Division, General Motors Corporation, Lansing 21, Mich.

• 1941 •

Once again, we're open for business at our old stand, with fond hopes of having more news of all of you than the column can hold. The reports that drifted in this summer were rather few and far between, but will be something to start the ball rolling.

Will Mott came out for a visit a short time ago. He was in Boston on business for American Brake Shoe, and seems to have a very interesting job: a roving ambassador and advance scout for new business in the metal casting line. Will has an idea for a class industrial directory, which will include each person's name and business affiliation (similar to the *Thomas Register*), and which should be a real aid to most of us in our work at one time or another. Listings will be both alphabetical and by product or service. We hope to have the project under way before this column appears in print. All of you should hear more of the story soon, if you haven't already. Will was on hand at the demise of one of our most eligible bachelors (I guess any remaining bachelors *must* be eligible), Teddy Walkowicz. Ted and Lois Loehr were married in New York on August 29. Beside Will, Charlie Butt, Chet Hasert, Mac McGuire, Connie Nelson, and Basil Staros were at the wedding. Teddy has a master's from Cal Tech and a doctorate from M.I.T., and is now with Rockefeller in New York. Best wishes to you both from all of us, Ted. — Also married last April were Esther Coffin and Arthur Martin, who graduated from Ursinus and took his doctorate at M.I.T. Both bride and groom are with the Hercules Powder Company. — Received an announcement of the arrival of Maria Pendleton Orr on April 20. Thanks very much for the official word, Bill. How about some of the rest of you sending along a card announcing new arrivals?

We ran into John Macleod in the swimming pool (wouldn't you know?) at the Mohawk Club in Schenectady while on vacation in July; he was in process of teaching his youngsters to swim. He told me Roger Robertson was back with General Electric in Schenectady. Congratulations are in order for Walt Aker, who received a Coffin Award last spring: this is the highest honor in G.E. Walt is with the Aeronautics and Ordnance Systems Department in Schenectady. — Alan Surosky's name appeared in the middle of a big advertisement of the Sun Oil Company not long ago. He is chief engineer for United States Testing Company, which ran tests comparing Sunoco gasoline with 15 other brands, using 25 cars of all current makes. Practically speaking,

Alan's results show no difference between Sunoco and the other brands. — Jack Kraus, who is now supervisor of quality control and packaging engineering for the accessories division of Thompson Products, Inc., in Cleveland, has been named chairman of the technical short course being presented in October by the Society of Industrial Packaging and Materials Handling Engineers and the Institute. — Conrad Hoepfner has been appointed manager of the electronics department of W. L. Maxson Corporation of New York, with responsibility for directing research and development on electronics phases of guided missiles, radar, computers, servomechanisms, and related systems of equipment. — President Ell'11 of Northeastern University announced the promotion of Walter H. Lob from research associate to assistant professor of research, effective July 1, 1953. — Rogers Finch is now in Rangoon, Burma, in charge of the United States aid mission there. The aid is scheduled to end before long, and Rog, as deputy director, took over to wind things up after the director came back to the States. The mission is to "operate in a slow fade-out" for about a year more.

Another international traveler is Stan Backer, who had a year's exchange lectureship at Imperial College in London. Stan wrote of spending all his spare time at the Old Vic, and of having a visit from Rog Finch and family en route to Burma. Stan is due back in the Mechanical Engineering Department at Tech this fall. — Pete Smolka is now living at 2425 King Street, Alexandria, Va. He wrote, "Transferred to Washington (Patent Division, Standard Oil Development Co.), and glad of it." How was the summer, Pete? — Captain Edward Eve, Jr., who received a master's in Marine Engineering in '41, has become maintenance officer at the Coast Guard Academy in New London, Conn. He was previously chief of the engineering division in the Eighth Coast Guard District in New Orleans. — Last May, Burnham Kelly presented a report of the Greater Boston Area Council to a meeting of town and city planning heads of about 50 greater Boston communities, and the recommendations of the Council were unanimously accepted.

How many of you saw Herb Klein on the TV show "This Is Your Life" last April? The show reconstructs the lives of well-known personalities, in this case that of actor Arthur Franz, by presenting people who have known them at various stages of their careers. Herb and Franz were fellow members of the dramatic society and the band when they attended school together in Woodbridge, N.J. Herb got an all-expense-paid trip to California to appear on the show. He is plant superintendent of the Massachusetts Memorial Hospital in Boston, lives in Swampscott, and is married to the former Semah Michelson of Brookline.

Present on Alumni Day were Johan Andersen, George Farnell, Lew Jester, Walt Kreske, Ed Marden, Connie Nelson, Reid Weedon, Paul Erlandson, and Sam McCauley.

New addresses, not all of which will be squeezed in this month, include Malcolm J. Abzug, 234 East Fifth Street, Mt. Vernon, N.Y.; Leo Alpert, 2437 North Utah

Street, Arlington, Va.; Lieutenant Colonel Richard Arnold, Jr., HQAAF, APO 862, Henry Auerbach, 8 Westwood Park Circle, Attleboro, Mass.; Arthur E. Baggs, Jr., Old County Road, South Lincoln, Mass.; Henry G. Bartlett, 273 West Market Street, Alliance, Ohio; Thomas E. Batey, Jr., 920½ South Grant Avenue, Tacoma 6, Wash.; Captain Sherman W. Betts, 208-67th Street, Virginia Beach, Va.; Paul M. Bishop, 7 Stuart Drive West, Glen Cove, L. I., N. Y.; Frank S. Bonham, Jr., 2801 Caspian Avenue, Long Beach, Calif.; Robert C. Butman, 13 Holden Wood Road, Concord, Mass.; C. Burt Cole, 4308-54th Avenue N. E., Seattle 5, Wash.; James S. Cullison, 3909 Via Solano, Palos Verdes Estates, Calif.; Brigadier General Leighton I. Davis, 35 Southgate Avenue, Annapolis, Md.; Albert W. Denham, Ionia, N. Y.; John C. Duncan, Jr., 70 Hillside Avenue, Freeport, N. Y.; John L. England, 243 Illinois Avenue, Dayton 10, Ohio; Francis A. Englehart, Jr., 16 Main Street, Talcottville, Conn.; J. Harold Erickson, Jr., 222 Travois Road, Louisville, Ky.; Paul M. Erlandson, 226 Windsor Drive, San Antonio, Texas; Winifred L. Erskine, 1143 Hedges Avenue, Fresno, Calif.; Richard Flint, R.D. 1, Box 610, Ft. Lauderdale, Fla.; William M. Folberth, Jr., 2323 East 67th Street, Cleveland 4, Ohio; Philip R. Fresia, 1145 Dalton Avenue, Pittsfield, Mass.; Sigmund Fritz, 8104 Tahona Drive, Silver Spring, Md.; Mrs. Marie Fortunati Gately, 19 Pines Road, Revere, Mass.; Curtis F. Gerald, University Oil Products Company, 30 Algonquin, Des Plaines, Ill.; George C. Gester, Jr., 17 Robbins Road, Arlington 74, Mass.; Alvin B. Glenn, 154 Niven Street, Syracuse, N. Y.; Commander Emery A. Grantham, Apt. 12A, 193 Clinton Avenue, Brooklyn, N. Y.; George R. Griffin, 96 Spy Pond Parkway, Arlington 74, Mass.; Colonel Clarence H. Gunder-son, Research and Engineering Command, Army Chemical Center, Md.; Raymond D. Harper, 211 Pondfield Road, West Bronxville, N. Y.; Lieutenant Colonel William F. Hart, Jr., 420-5 Kearney Avenue, Ft. Leavenworth, Kan.; Harry J. Heimer, 3620 Hauser Boulevard, Los Angeles 16, Calif.; Erling H. Hustvedt, 441 Arlington Way, Menlo Park, Calif.; John A. James, Jr., E. I. duPont de Nemours and Company, La Porte, Texas; Stephen W. James, Elmgate Manor, Evanston, Ill.; Edwin G. Kispert, Drum Hill Road, Wilton, Conn.; Fritz R. Krum, R. D. 1, New Canaan, Conn.; Alexander F. Leonhardt, 4317 Baronne Street, New Orleans 15, La.; Joseph Levine, University of New Mexico, Albuquerque; Donald H. Marquis, Control and Thermal Power Department, General Electric Company, Schenectady, N. Y.; Newell H. McCuen, Chevrolet Central Office, General Motors Building, Detroit 2, Mich.; J. Rand McNally, Jr., 103 Norman Lane, Oak Ridge, Tenn.; Professor Frank J. Mehringer, 2196 Story Avenue, Niskayuna, N. Y.; Captain Francis B. Merkle, Naval Base, Philadelphia 12, Pa.; Louis J. Minbiole, Jr., 17384 Parkside, Detroit, Mich.; Muller P. Moody, M. D. Moody and Sons, Inc., 4652 Phillips Highway, Jacksonville 7, Fla.; Vaughan Morrill, Jr., 9747 Litzinger Road, Brentwood 17, Mo. — IVOR W. COLLINS, JR., *General Secretary*, 28 Sherman Road, Greenwood,

Mass. JOHAN M. ANDERSEN, *Assistant Secretary*, Saddle Hill Farm, Hopkinton, Mass.

• 1942 •

We just made it back to Cambridge in time to catch The Review deadline. After covering over 11,000 miles by plane, train, Renault, gondola, mountain bus, Paris Metro, tiny trolley and shoe leather, I thought we were staying put for a while — until the article below came in the mail about Ronald Shainin's safari to South Africa. Sandy's (Mrs. R.) first reaction was, "When are we going to see Africa?"

Ronald's plan, as reported in the Buffalo *Courier-Express*, along with a three-column picture of him, his jeep, and his elephant gun, was to sail for Capetown. Some time in August he started driving (alone) along the southeast coast of the African continent. Then he was to swing westward to Pretoria, the capital of South Africa, and afterwards northward into Northern Rhodesia for lion hunting. "I've been invited by a native known as the paramount chief of Barotse Province to hunt lions," Ronald reported. "It seems there are so many lions in the Seshke and Seranga districts that officials are appealing to hunters to kill some of them off." He hastened to add, however, that, except for lion hunting, he intends to limit his shooting with firearms to seeking out antelope, wild boar and other such animals for food. His principal shooting will be with a movie camera, recording his travels, a side trip to Mt. Kilimanjaro, and the eventual sale of jeep, trailer, and all excess baggage in Nairobi. Good luck, Ronald, from all of us. We look forward to hearing from you before Christmas, and to seeing your pictures at our 15th Reunion in 1957, if not sooner.

Notes from various sources announce the publication of Herman Feshbach's set of books entitled *Methods of Theoretical Physics*. He is coauthor with Tech's world-famed Professor Philip M. Morse and the publisher is McGraw-Hill.

Congratulations are in order to F. Richard Meyer, 3d, who has been named assistant to the president of Acme Steel Company in Chicago. Dick was formerly manager of commercial research. Among his community activities he served as president of the Chicago Junior Chamber of Commerce. Also in the newspapers is the appointment of John Barry Davidson as director of research of the Cowles Chemical Company of Cleveland, Ohio. He did his graduate work at Tech after receiving his bachelor's degree at Williams. Since receiving his doctorate in April, 1942, he has been working in the fields of surface active agents, silicones, and paper-treating resins; and several patents are associated with Dr. Davidson's name.

The Navy reports that Captain D. F. Kinert, who took his M.S. with us in 1942, has completed his work at the Naval War College and joined the Logistics Division on the staff of Admiral Lynde D. McCormick, Commander in Chief, U. S. Atlantic Fleet at the Naval Base, Norfolk, Va.

In the course of our travels we came across only one '42 man — Bernie Driscoll sends his regards from Paris. He, Mary

Pat and Billy, Wally, and B. J., Jr., are comfortably ensconced in a villa in Sevres (several kilometers from Paris). The boys are rapidly learning to speak French with just the proper accent while papa is busy with the U. S. Air Force Research and Development Board liaison work with the N.A.T.O. countries. Mary Pat finds house-keeping quite different from here at home, and we all agreed that shopping for groceries in French has its problems and surprises. We New Englanders were pleased to note that artichokes are cheaper than string beans — and very good.

Further along, in Haifa, Israel, Joseph Zeitlen'39, Course I, came to the rescue of an unknown American (me) scouring the town to buy, liberate, or beg a driving seat cushion. It didn't take long to discover our common pasts and compare notes on present activities. Joe is a soil mechanics and soil stabilization specialist working for the T.C.A. (U.S. Technical Cooperation Administration) as an advisor to the Israel Government and the Technion (Engineering University) on the design and construction of earth dams.

Not far from Rotterdam, stop number 19 for us, is the little fishing and oil refining town of Vlaardingen. Since Sandy had a classmate living there, we, our one-minute camera and an electronic flash unit, took a 20-minute train ride out to visit for the evening with the Buysers. Jan, I soon learned, is also a civil engineer with a soil mechanics background. He graduated from Tech in 1949 and has been with the Caltex Oil Company since. After one year in New York, three in Vlaardingen, his future plans call for him to go to the Philippines for four months and then the whole family will move to northern Italy where he expects to work in a brand new catalytic cracking plant.

And before we landed at Idlewild we crossed paths with one more fellow 'umnus — Beano Goodman'40, IX, appeared next to me at London Airport while I was burning up my pocket slide ruler converting dollars into pounds, shillings, and pence. He runs his own specialty chemical business in Madison, Ind., and still gets into a wrestling ring from time to time (although I suspect in a heavier class than he was in 13 years ago). The Goodmans were touring, as we were, and enjoying it every bit as much. Western Europe and Israel are certainly booming — much to the credit of Marshall Plan and other economic aid from us, all very much appreciated. But about military programs there is far from a unanimous agreement on effectiveness. Even some conservative industrialists in Europe feel we are exhibiting an unreasoned fear and lack of understanding of communism and of Russia.

As for statistics we visited eight countries, took over 900 pictures, slept in 22 beds (and three airplanes), avoided two heat waves in the U. S., drank innumerable glasses of good beer, strong tea, tasty (and inexpensive) wines, and reentered the U.S.A. with 14 pieces of luggage — suitcases, parcels, briefcases, cameras, and assorted accessories. We hope to do it again some day and in the meantime hope that each of you gets and uses the opportunity to take such a trip and that you have just as delightful, fruitful and interesting a time as we have had. — LOUIS

• 1943 •

For the benefit of those who were unable to attend our 10th Reunion at the Mayflower Hotel in Plymouth, Mass., last June, the following is a brief accounting of what took place there. First arrivals on Friday, June 12 were Captain Dave Falk of the Air Force, from Baltimore, Md., and Bernie Brindis and his wife from New Brunswick, N. J. By dinner time about 96 people had checked in, including Sea Captain Jim Hoey and Able Seaman Frank Swenson, who arrived via the waterways on Jim's 42-foot yacht, *Ranger II*. Friday evening the whole gang enjoyed a party in the lounge of the Mayflower's Shore Club, where most of us were staying, and old acquaintanceships were vigorously renewed. Except for the roof-raising arrival of Gus Calleja from Havana, Cuba, at 4:00 A.M., Friday night was rather quiet. Gus came up from New York with Bert Picot and his wife.

Saturday morning the gang dispersed to take in the various sports activities, the most popular of which was sunning in the deck chairs around the swimming pool. The sun-bathers included the Carl Carlsons from New Bedford, Mass., the Art Vershows from Newton, the Seymour Kapsteins from Brookline, the Herb Shiveks from Chestnut Hill, the Howard Bollingers from New York, Hugh Pastoriza and girl-friend, also from New York, the Gene Eisenbergs from Brookline, the Bill Lairds from Pittsburgh, the Stewart Hills from Oneida, N. Y., and the Charlie Hathaways from Litchfield, Conn. Also present at the pool were Mrs. Bob Anderson, Mrs. Bob Rumsey and Mrs. Ralph Leader, whose husbands were out playing golf.

Present from the New York area were Alan Milman and Bill Kates and their wives, as well as Sam Scharff, Ray Hahn, Ray Frankel and Mort Goodfriend, four of our bachelor group. Mrs. and Mrs. Sherman Sackheim and Mr. and Mrs. Richard Stern well represented the Westchester County area. Bob Reebie and his wife came in from Chicago, and our other long distance champions, Bob and Sue Lichten, arrived from Dallas, Texas. Also enjoying the festivities were Mr. and Mrs. Trygve Blom, Bill Terry, Yusuf Meer, John Sprague, the Morris Rosenthals, the Gil Monets, the Pete Weisenthals, the Jim Inghams, the Leo Duvals, Russ Coulson, Greg Azarian, the Warren Knauers, the Morrie Seiples, and the Bud Greenwalds. John Guarrera was in from Long Island, Guy Billings and his wife from Pennsylvania, and Mr. and Mrs. Bob Mitchell from New York.

Kemp Maples was solo, as his wife had just given birth to their fourth child; Fred Kaneb from Cornwall, Ontario, Canada, was also single as his wife was expecting a birth at the time. Mrs. Fred Perry, Mrs. Chris Matthew and Mrs. Ken Warden ably assisted their husbands in the organizational duties of the Reunion. Also present with their wives were Dick Childerhose, Warren Fuchs and Leo Fitzpatrick. Bill Verrochi was out play-

ing golf most of the time, and almost missed the magnificent New England clambake we all enjoyed so much Saturday noon at the Beach Club Terrace.

Saturday afternoon our Class played baseball against the Class of '48, who were also having a reunion at the hotel, and I am told that we beat the youngsters handily. That evening we had a cocktail party before dinner, which warmed us up for the Class Banquet. Professor Paul Chalmers of the Institute, Advisor to Foreign Students, was our speaker, and we really enjoyed his stories about the M.I.T. of today. There was dancing and cocktail lounge activities after the banquet, where our late arrivals, the Jack Foleys from Boston and the John R. Foleys from Connecticut, joined us. Following that we adjourned again to the Shore Club, where Bud Greenwald and his wife won the prize for being first in the ocean on Sunday morning by taking a chilling dip at 12:01 A.M.

The Sunday luncheon wound up the affair, and the prizes for every conceivable kind of thing were awarded. The Lichtens won a gallon of anti-freeze for coming from the most distant place, Dallas, Texas. Other prizes were just as humorous, as they were awarded on a grab bag basis, such as Mort Goodfriend, the confirmed bachelor, winning a baby harness. Before it was over, everyone had a prize. Total attendance reached 130 with the arrival of Ken Wadleigh and Rupe Hewes and their wives, on Sunday, both having been delayed by their work at M.I.T. in connection with the commencement.

Ray Frankel conducted a poll Sunday, with the following results: 55 per cent of those present were in engineering work; 84 per cent used their engineering background; 68 per cent are in management activity; 16 per cent are in family owned businesses; and 20 per cent have their own business. Eighty per cent are married; the average family has two children. (Frank Swenson and his wife brought up the average with five children.) Of the 64 responses, 43 are Republicans, 11 Democrats, 8 Independents, and 2 were visiting foreigners.

Result of the class elections were: Jim Hoey, Jr., President; Chris Matthew, Vice-president; and Dick Feingold, Secretary-Treasurer. The gang gave a rousing vote of thanks to Dick Childerhose for his leadership during the past 10 years, and to Clint Kemp, who so ably wrote these notes for that time. We missed the presence of Jack Tyrrell, our Class Agent, whose wife gave birth to a daughter during the time of the Reunion.

We have news of the marriage on July 18 of Frank L. Metcalf to the former Elizabeth Greenwood of Scarsdale, N. Y. Mrs. Metcalf is a graduate of Vassar College, and was on the faculty of the Holten-Arms School of Washington, D. C. They are living in Kensington, Md. On August 20 our Class President, Jim Hoey, Jr., and Miss Jane Byrne were married in Brookline, Mass. Jane is on the staff of the Children's Hospital in Boston; the Hoey's are living in Newton, Mass.

The works of Arnold Arheit were included in an exhibition at the Addison Gallery of American Art at Phillips Academy, Andover, in a showing this sum-

mer. We received word that Andrew Hillhouse has been named sales engineer in the Washington office of Solar Aircraft Company. Andy was previously with the Naval Ordnance Laboratory, and is a graduate of the George Washington University Law School. George H. Hotte has been named head of one of the new plants of the National Aniline Division, where a new type of nylon will be produced. Sperry Gyroscope Company has announced that John J. Hess, Jr., has been promoted to the new position of engineering section head in the Flight Control Engineering Department. John, who was at the Reunion with his wife, has done some pioneering work in flight control instrumentation.

A clipping from the Wilmington, Del., *News* informs us that Irene duPont, Jr., has been elected a member of the Board of Directors of the Wilmington General Hospital. He is associated with the polychemicals department of the DuPont Company. Wilbur B. Davenport, Jr., is the author of an article entitled, "Signal-to-Noise Ratios in Band-Pass Limiters," which appeared in the June issue of *Journal of Applied Physics*. Navy Captain Robert L. Townsend, a graduate student with our Class, recently reported for duty to the headquarters of Admiral McCormick, Commander in Chief, Atlantic Fleet, at Great Lakes, Ill.

Jim Hoey received the following letter from Dick Zeamer, with news for the notes: "June this year found me in the middle of a job change. As a result I missed our Class Reunion; although, until the last minute I had planned and expected to be able to attend. I have accepted a job as assistant to the mill engineer of the Nekoosa-Edwards Paper Company. The change appears to be a happy one, for there is an excellent opportunity for advancement.

"... From 1943 to 1946 I was in the Army as a mechanical engineer assigned to ordnance equipment development in Detroit and Washington. My rank on discharge was first lieutenant. From 1946 to 1948 I was back at M.I.T. working for an S.M. in Building Engineering and Construction. Following that I was employed by the Morton C. Tuttle Company of Boston (builders of industrial plants and paper mills) as engineer and sales contact man. Then in June, 1953, I began my present employment here in Port Edwards, Wis. In July, 1944, I was married to the former Jean Hellens, Wellesley '44; we have two children: Audrie Dagna, aged eight, and Richard Warwick, aged three."

In June the Alumni Office received word from Jose U. Jovellanos, who is head of the Washington office of the National Power Corporation of the Republic of the Philippines, an office attached to the Philippine Embassy. Jose is a Course II graduate of our Class. From Palo Alto, Calif., we have an announcement from Mr. and Mrs. Edwin H. Stewart, Jr., of the birth of their son, Eric Daniel Stewart, on August 22, 1953.

It is with sincere regret that we report in these notes the recent death of our friend and classmate, Irving Shaknov, late of Boston, Mass. Irving was lost in action on May 15, 1952, while a member of a special scientific group studying combat

problems in Korea. He was on a secret mission over enemy territory, and the plane carrying him was brought down by enemy anti-aircraft fire. The Class extends its deepest sympathy to his family. — RICHARD M. FEINGOLD, *Secretary*, 49 Pearl Street, Hartford 3, Conn.

• 2-44 and 10-44 •

Old father time has jet propelled himself upon us with supersonic speed and we find that our 10th Reunion is just ahead. A Reunion Committee representing both 2-44 and 10-44 has been formed and is now arranging a program for the group meeting to take place on June 11, 12, and 13. The group has decided to make it a couples' affair, so plan to take the ladies. At this writing the location has not been definitely decided upon, but we plan to have a resort that will offer the best in food, facilities, and entertainment for the group.

Mal Kispert has sent out class dues and he would like to have the returns in as soon as possible so the Committee can have a working fund. We don't have all the addresses and we don't want any one left out, so if you have not received your note, just drop a line to Mal at M.I.T. and he will carry on from there.

It is going to be a festive occasion so mark your calendar now as we predict a bang-up time for all. — BURTON BROMFIELD, *Secretary*, 608 Grove Street, Newton Lower Falls, Mass.

• 1945 •

Judging from the heaps of correspondence we have received, you all must have had a wonderful summer — so wonderful that only a couple of you found time to drop us a line concerning your "where or what abouts." Possibly attendance at some collegiate football game this fall will bring forth a bit of nostalgia — if it does, write! In fact, write anyway, for as Prexy Chick Street indicated in his spring class letter, it is less than two years to our 10th Reunion, and we need your thoughts and ideas if it is to be a success.

Ed and Elinor Stoltz traveled all the way from Wheeling, W. Va., to attend the Alumni Day festivities last June. Others in attendance included Ed Andrews, Chris Boland, Frank Carroll, Alvin Cohen, Dave Flood, Jay Forrester, Charlie Hart, Tom Hewson, Jerry MacKinnon, John McCarthy, Bob Maglathlin, Bill Martin, Bill McKay, Bill Meade, Warren Miller, Pete Quattrochi, Art Schwartz, Bill Shuman, Waite Stephenson, Bob Turner, Dan Vershow, Don Whitehead, and Dick Winkler — a most worthy turnout considering the very few that have been on hand in years past. After the banquet Ed and Elinor tossed down a few with Bill Martin, Frank Carroll, Bill Shuman, and John Sullivan of 2-46. Bill Martin is in the consulting engineering business with regard to electronic devices and is most enthusiastic. Frank Carroll is out of the Navy but we have no report on his present employment status. Bill Shuman is now with Hitchiner Manufacturing Company, a die caster in Milford, N.H.

On April 14, the Granite State Chapter of American Society of Tool Engineers toured the Hitchiner property at which

time Bill spoke on "Design for Use of Investment Castings" — a noble subject for a noble classmate!

Getting back to Alumni Day and Stoltz' letter, it seems John Sullivan has been employed by an Esso subsidiary in Venezuela where his salary is tax free except for two per cent which goes to the Venezuelan government. No income taxes. We are organizing an expedition now — would you care to join us! Ed didn't have any information regarding the other boys in attendance but we expect Bill McKay may have something to report in a future issue. I saw Waite Stephenson in the officers' club at the Portsmouth, N.H., Navy Yard in July, and he reports that submarine duty is good but he is looking forward to civilian life in December. Jerry MacKinnon is out of Ohio and back in the Boston area. The Stoltzes from all reports had a most excellent June excursion, for in addition to New York and "bean town," they visited Corning, N.Y., Buffalo, Niagara Falls, Ottawa, Montreal, Quebec City, Portland, Me., and points in between. How does it feel to be back peddling for Johns-Manville, Ed?

In early August we received a most interesting letter from H. Paul Grant, the old *Voo Doo* literary editor. Since Paul's style of writing brought back fond memories of his *Voo Doo* stories, I am quoting most of it below: "Your impassioned pleas for class news have overcome my commendable modesty and a graceful reluctance to reveal what I am forced to admit is a superlative record of achievement, since that bleary day in February, 1945, when V-12 and I went our separate ways. A year and a half later, after V-J Day, the Navy finally gave me an unconditional release; I was waived out of both major leagues and crept cautiously back to Cambridge. Finding to my relief that V-12 had vanished without a trace, I took up where I had left off in Course XIII, and graduated in '47 (but, of course, keeping my affiliation with '45 out of sentiment). Ever since then I've been working in fluid dynamic research at Harvard, mostly on jet engine compressor problems on a project sponsored by Pratt and Whitney Aircraft. Picked up a master's degree in aero-dynamics from Harvard Engineering School during this period and got my name on a couple of papers — I.A.S., A.S.M.E., and Yachting. Recently a group of us at Harvard have launched a side venture called Flow Corporation, object being consulting, development, and manufacture of fluid flow instruments. . . .

"Family-wise, I married Marion (nee Beaton, a Boston school teacher) in 1948, and we now have 3.5 children (3.0 of them daughters, the gender of the remainder in doubt till December), no television set, no car, no house, no dogs or cats, one fine FM radio, one eight-foot sailing dinghy, and the complete works of Walt Kelly." Sound familiar — you bet it does! Paul also reports that Bob Turner has left Sperry Gyro to accept an offer with the Operations Research group financed by "Uncle Whiskers" in Washington.

With due respect to the Secretary of the Class of 1920, we can report that Ed Reed, an old Phi Gam, has just recently

been transferred from the Forbes Finishes Division to the Milwaukee Paint Division of the Pittsburgh Plate Glass Company. We have no idea what the name of Ed's wife is, but we do know they have a three-year-old daughter. George T. Upton's father, Robert W. Upton, was recently appointed by Governor Hugh Gregg of New Hampshire to the U. S. Senate seat formerly held by Charles W. Tobey of TV fame. As for George himself, the last we knew he was with Chance-Vought in Texas along with Nick Mumford. Carol and Don Kuehl of Manchester, Conn., had twin daughters, Allison Elaine and Pamela Judith, on May 26 — our latest report is that the proud father has at last recovered. Steve Haybrook, who received his master's degree in hydraulics and soil mechanics and foundations with us recently left the Vermont Public Service Commission where he had held the post of civil engineer for the past five years. Rog Hood who spent two years at Bethlehem's Fore River Yard in Quincy returned to inactive duty at the end of July. Lieutenant Chuck Patterson is still there and from all reports is not killing himself working — most of his day is spent in commutation to and from Attleboro, Mass. The Rochester, N.Y., *Democrat and Chronicle* last spring reported "38 Derby Champ Promoted to Major" — it seems that John A. de Vries was recently promoted to major in the Air Force. Commander Ralph Gerber, U.S.N., is the author of an article entitled "The Choice of a Career Within the Navy" which appeared in the June, 1953, issue of *United States Naval Institute Proceedings*.

Our congratulations to James J. Strnad who recently has succeeded to the presidency of Lempeco Products, Inc., which his father started 35 years ago. Lempeco, which has its main plant in Bedford, Ohio, employs about 1,700 men and women. Normally a manufacturer of machine tools and automotive machine shop equipment, Lempeco also makes shells for the Army. Best of luck in your new position, J. J. Bob Miller, who was last reported on the West Coast as a Cal Tech graduate student in jet propulsion, is now in Huntington, Long Island, working at one of the many aircraft factories in that locality, I presume. Bob Hibbard has left Du Pont and is now with Joclin Manufacturing Company in Mt. Carmel, Conn. Mrs. Barbara S. Cornack, nee Barbara J. Seavey, has forsaken Cambridge for Capetown, South Africa. Another classmate abroad is Jim Critchlow who is working for the American Committee for Liberation of Peoples of Russia, Inc. Jerry Lott has joined the staff of Pharmaceutical Products Company in San Juan, Puerto Rico. Ed Kelly is now in Lexington, Mass., while fellow Kappa Sig Harry Eisenhardt still remains in sunny California. That's it for now — no sermon this issue! — CLINTON H. SPRINGER, *Secretary*, c/o Firemen's Mutual Insurance Company, 420 Lexington Avenue, New York 17, N.Y.

• 1948 •

Flash! Zimmerman gets married! Yes, on our list of summer bridegrooms we find

one William R. Zimmerman, Class of '48, who was wed on July 3 of this year. The "lucky girl" is Lorraine Zastrow of Wausau, Wis. We have made our home in Chicago and are enjoying life in the big city very much on the few occasions that we can manage to be home!

We were not alone in taking the big step as there were many weddings among the Class of 1948 this summer. Richard Bird was wed to Dorothy Heinrichs of Middlebury, Vt., and Carl Doherty married Judith Brackett of Eastham, Mass. Fred Folberth took Virginia French of Conway, N.H., as his bride, and Julianne Keenan of College Heights, N.Y., was wed to William Buckley. Other summer brides were Dorothy Jordan and Elinor Mara, both of Massachusetts. Miss Jordan wed Maurice Ponti and Miss Mara wed Hans-Ulrich Wydler. Congratulations are in order for all of these happy couples. Next in order we have news of a son, Gregory Francis, who was born to Mr. and Mrs. Henry J. Dayton. Our best wishes go to the proud parents of young Greg.

News of our classmates in the service of the country includes the following: Army Major Gerald M. Cravens of Beaumont, Texas, was recently awarded the first Oak Leaf Cluster to his Bronze Star Medal for meritorious service in Korea while serving at Far East Headquarters in Yokohama, Japan. Major Cravens, whose wife and son reside in Beaumont, was signal operations officer for the IX Corps on the peninsula for 10 months. He rotated to Japan in June and is now a staff, officer in the headquarters Signal Section.

First Lieutenant Mathew J. Boyle, Jr., recently piloted an American Air Force Thunderjet to Dublin, Ireland, on a navigational flight from the Western Zone of Germany. Let's have more news from, and of, the men in service.

We have word that James M. Orr has received his medical degree from the University of Buffalo. Another award granted to a member of our Class was the Department of Commerce silver medal for meritorious service, and it was granted to Emanuel Maxwell and a colleague of his, John R. Pellam, Class of 1940. Dr. Maxwell received the award for "his outstanding contribution to science through the discovery of the isotope effect relating the transition temperature of superconductors to the isotope mass."

Wilfred Roth in conjunction with his laboratory partner, Stanley R. Rich, recently has developed a new device for testing the viscosity of substances, which is aimed at reducing costs in industry, and which has already played a part in saving a man's life. The men, who operate the Rich-Roth Laboratories in Hartford, have sold their "ultra-viscoson" to the Bendix Aviation Corporation, which is planning to mass-produce it in its Cincinnati division. The men have many other inventions to their credit but most of them went to the government or to Raytheon. The ultra-viscoson is what Dr. Roth terms "our first sizable invention, speaking in monetary terms, on an independent basis." Dr. Roth is 31.

Some time ago we received a letter from Harry Meyer but we haven't acknowledged it yet. We thought you might

be interested in hearing parts of it: "This is just a brief note to assuage my conscience on the matter of keeping up to date with my Class Secretary. . . . I am still in the personnel and industrial relations department of Minneapolis-Honeywell working on a variety of assignments which have mostly to do with our 1,300 engineering personnel. It is very enjoyable work with many satisfactions to be obtained from it, and there is still much to learn in the field.

"My spare time these days is spent fixing up my home, playing golf, and attending classes at the University of Minnesota. My family, of course, occupies much of my time very enjoyably. You might note that our second daughter, Mary Ellen, was born on July 9, 1952. . . . You can see that with two daughters and a cocker spaniel, my wife and I usually have our hands full." We enjoyed hearing from you, Harry.

Ken Brock writes occasionally from his "cell" at Fort Dix and apparently he finds Army life every bit as exciting and pleasurable as the rest of the G.I.s you know, and we know he would appreciate an occasional note from some of you. His latest address is: Pvt. K. S. Brock, US51240766, 9th Recon. Co., 47th Inf. Regt., Ft. Dix, N.J.

We wanted to include news of the Reunion but we were unable to attend so we have none to give you. If some of you who were there could pass along the high lights of the occasion to us, we can include it in the next issue. So long for a while.—WILLIAM R. ZIMMERMAN, Secretary, 3130 North Lake Shore Drive, Chicago 14, Ill. RICHARD H. HARRIS, Assistant Secretary, 26 South Street, Grafton, Mass.

• 1950 •

Back home again after spending a very delightful tour of duty with the Army Engineers in Germany. I managed to sneak home in time for Alumni Day and say "hello" to the '50 men who showed up for the yearly get-together. There was a goodly turnout with the following classmates registered: Jay Bedrick, Ed Dmytryk, Frank Ferrigno, Richard Grecco, Charles Grice, Henry Johnson, Tom Keane, Bob Mann, Bill Maroni, Don Miller, Carl Moos, Ed O'Connor, Howard Pendergast, Charles Puksta, J. Lowen Shearer, Lester Smith, Francis Von Muller, Jr., and Donald Fritch. I confess I didn't get to talk to all of the gathering, but here are a few quips about some of the boys.

Jay Bedrick is still at the Institute working at D.I.C. Charles Grice has a very interesting position with a firm in the southwest U.S. He is busy utilizing his Course VI training to locate oil. He operates an instrument that sends electronic impulses into the earth and by measuring the rebounds and interpreting the results, it is possible to plot the location of underground deposits of oil. Henry Johnson is associated with the Hood Rubber Company in Watertown and very happy with the arrival of his first child, Carl Joseph, in April. I was living in the same B.O.Q. with Tom Keane down at Fort Belvoir, Va., last April (1952) when I bid

him farewell and he sailed for Korea. He managed to stay in one piece and supervised the construction of many roads while with the Army Engineers. He is back home in Boston now, safe, sound, and a little wiser and a lot happier as a civilian.

Bob Mann accepted an assistant professorship at the Institute and when last seen was dreaming up unsolvable problems to give the undergraduates for their exams. Bob has turned into quite the tradesman. He bought a house out Lexington way and like all home owners, his work is never done.

Don Miller has a very good job with Stop and Shop, the supermarket chain. He is married and has two daughters, one born in July and the other 14 months old, and a son three years old. Les Smith is busy testing propellers for the Hamilton Standard Propeller Company in East Hartford, Conn. Charles Puksta is working at the Turbo Laboratory at Tech.

Before I get too far along with this column, a word of thanks to Myles Spector for pinch-hitting while I was away serving with the Army in Germany. And I know the rest of the Class is grateful to Myles for keeping them informed of class doings during this past year. I'm back at my trusty desk again, with news clippings scattered here and there and wedding announcements piled high, passing news on to the Class of '50. But now stop the presses, hold everything, I have a very important bit of news. I'm a father, and a proud one at that. Little John T., Jr., arrived bright and early the morning of July 14, 1953, and mother, baby, and father all are doing fine, especially father at the 2:00 A.M. feeding. Having another mouth to feed, I decided it was about time to go out and go to work. I didn't go too far away from Tech to find work. I'm employed with the George A. Fuller Construction Company which is building a very ultra modern auditorium for the Institute. J. T. is helping to engineer the construction of the building. At this writing we still have a large hole in the ground but the building is slowly taking shape and by November most of the rough concrete will be completed.

Now for news of the newlyweds. Bernard Burke took Jane Pann for his bride on May 30, 1953, at Holy Trinity Church, Greenfield, Mass. Bernard is working for his Ph.D. at the Institute. A double ring ceremony united Arthur Burrill and Irma Hodgdon at Wareham Methodist Church on June 7, 1953. Arthur received his master's from Rensselaer two days prior to his wedding day. After a wedding trip to Maine he and his wife scooted out to Cincinnati, Ohio, where the breadwinner has a position with Procter and Gamble Company. Paul Egan and Ruth Timmins said "I do" at St. Jerome's Church in Arlington on May 30, 1953, and after a Bermuda wedding trip settled down to married life in Boston.

Gerald Fisch and Jean Eleanor White of Middletown, Conn., were wed on June 20, 1953, and after a Nova Scotia honeymoon they settled down in Toronto, Canada, where Gerry is a member of the management consulting firm of J. B. Fraser, Ltd. Jack Jacoby was best man for Gerry, and Tom Hilton, one of the ushers.

Sanford Carlton Johnson of Worcester and Barbara York of South Weymouth, Mass., exchanged vows in the Gordon Chapel of Old South Church, Boston, on May 16, 1953, and the couple have settled in Boston upon returning from their Bermuda honeymoon.

Constantine James Lahanas and Carolyn Ruth Spaulding were joined in matrimony on May 10, 1953, and are now happily settled in Wellesley Hills, Mass. Robert L. Miller and Peggyanne Riker were married on June 27, 1953, at a double ring ceremony in the First Unitarian Church, West Newton. Acting as ushers were a couple of classmates, Chester Claff and Jake Bartas. Bob is working on his Ph.D. at Brown University and he and his wife are living in Providence, R.I.

Don Rose and Margaret Wray were wed on July 31, 1953, at Santa Monica, Calif. Samuel Tennant and June Ann Fleischer were married in Dallas, Texas, on June 20, 1953. Sam received his master's from Purdue and is now working in Dallas, Texas. William Wesson and Anne Simmons were wed on May 30, 1953, in Emmanuel Church, Boston.

I also have a few clippings announcing engagements of '50 men to their favorites. June Stevens Haraden was engaged to William Gordon. An early fall wedding is in the planning so by press time they should be Mr. and Mrs. A May wedding was in the planning when the engagement of Patricia Ellen Kennedy to Charles Renn was announced last March. After the wedding the couple planned to settle in California. Diana Belanger, the document librarian for the Digital Computer Laboratory at the Institute, and Frank Helwig, a research engineer at the laboratory, announced their engagement in April and they were planning a June wedding.

Now for some news picked up from here, there and everywhere. William Corcoran served his two-year hitch with the Army and is now living in Hopedale, Mass., and working for the Draper Corporation. Dave Gushee served his stint in Korea and now, a happy civilian, is working for Du Pont in Wilmington, Del. Dwight Macauley is working for Anderson Nichols Company in Boston and he and his wife are living in Cohasset, Mass. Bob McPherson is living in Boston and working for the Melpar Corporation in Cambridge. Bill Murphy is employed by Raytheon Company and he and his wife are living at Wellesley Hills. Enders Robinson is living in Brookline and is a research associate in Geology at the Institute.

Roger Bond has been awarded a Fulbright Scholarship for study of architecture at the University of Rome. Since graduation Roger has been in the employ of Donaldson McMullen of Weston, Mass. Robert Scifres is doing very well at the National Gypsum Company and in June he was promoted to a production manager of gypsum plants. Louis Robinson recently was awarded his Ph.D. in mathematics at Syracuse University. Michael Dubitsky has joined the staff of Arthur D. Little Company. After staying on at Tech for his master's degree in '51 he worked in Israel for a year as an air conditioning engineer.

Tony Tabak is in the Army and has a nice assignment as a metallurgist at the Frankfurt Arsenal in Philadelphia. He is an engineer in the pilot production department of the arsenal. Carroll Frank has joined the Radar Laboratory of Hughes Research and Development Laboratories, Culver City, Calif. He was formerly associated with Motorola Research, Inc. Robert Weber is now with the Scovill Manufacturing Company, Waterbury, Conn., after being associated with the Morrison Knudsen Company, Grand Coulee Dam, and the Aluminum Company of America Reduction plant, Wenatchee, Wash. Al Petrofsky is back home again after serving his time with the Army Engineers in Korea. Sterling Brisbin was stationed with the Engineers in Verdun, France, where he became quite the expert on French night life. Ruth and I were driving through France on one of our vacations when we stopped in to see Bris hard at work. He proceeded to tell us all the high spots of what to see in "Gay Paris" and actually was quite a help to us. (We were only a couple of foreigners from Germany.) He rotated back to the States the same time as I did in late May and he is now working in Boston.

Duke Thomas is still in the U.S. Navy and at last report the boy had arranged an assignment as "Secretary to the Admiral" at the Norfolk Navy Base and for all intensive purposes he was doing all right. He said "I do" in July, 1952, and recently, August 7, 1953, he and Ellen had an addition to the family—a baby girl, Hannah Cecily. Dot and Jack McKenna are also proud parents of a baby girl named Mary Lou born in April.

And that's that for now. Did you see your name in print in this issue? If not, drop us a line, or two, or three, telling of your new job, new wife, new baby, and so on, and your trusty Secretary will pass the good word to the rest of the world via this column. — JOHN T. WEAVER, *Secretary*, 18 Buena Vista Park, Cambridge, Mass.

• 1951 •

Greetings to ye olde '51 mates. I hope that all of you had very relaxing summers and now can devote a few minutes of time to keep up with the doings of our class members. By the way the Class of '57 has begun its work at Tech—rather hard to believe that we made our exit in '51. Now, let's sort the lucky bag and see what the news is.

Marital news: Mel Bowers took Juliana Richards as his wife in April at Boston; they now live in Maryland. Bill Elmer and Cathleen Burns said "I do" in June at Boston. Tom Weil joined the married ranks when he and Dianne Isaacs walked the marital path in Boston in June. And Harold Zitzow and Virginia Baisley entered the "two" stage in June at Boston. Morley Drucker became engaged to Marly Ruttenberg way back in April. At this point, Morley is probably a benedict. How about it, Morley?

Dave Grossman received a Fulbright Grant for studies in Italy. Dave received his degree in architecture in 1951 and this past June received his degree in city planning. He will continue his studies in the city planning field at the Higher Institute

of Architecture at Venice, Italy. Good luck, Dave! Roger Compton received his degree of master of automotive engineering at the Chrysler Institute of Engineering after completing the two-year course of study.

Service news: Clark Abt, while a student at the Keesler Air Force Base at Biloxi, Miss., really enlivened his extra-curricular activities. Clark and three others were aboard a 15-foot sailboat which floundered three miles from the shore at Gulfport. The group decided that one of them should try to swim to shore to get help. Clark volunteered. After a three and one-half mile swim, Clark staggered to the shore and notified the Coast Guard. They proceeded to make a search and discovered that a shrimp boat had picked up the others.

Al Gesek recently completed a course in chemical warfare at the Army's Eta Jima Specialist School in Japan. The two-week course is designed to teach defenses against chemical, bacteriological and radiological warfare. Al, these courses are somewhat different than those offered by our old Department, XV. Cadet Viril Haas is now a senior at West Point. George Underwood finished up his training at Newport, R.I., and is now an ensign in the U. S. Navy. Dick Valpey received his silver bars while on duty in the Army Signal School at Ansbach, Germany. Walt Zengerle, who arrived in the Far East in April, is now serving as a statistical clerk in the adjutant general section of the Headquarters of the Korean Communication Zone. Hal MacKay is now enjoying his civilian status after completing his tour of duty with the U.S.A.F.

Miscellaneous: Fred Weitz is now at Wright-Patterson. Marc Aelion is still working hard at M.I.T. Marv Grossman expects to complete his "B" School studies in February—an illness last fall caused the change in plans. Your Secretary joined the organization of I.B.M.'s Poughkeepsie plant. My tour of study and work experience ends next March after which I'll be assigned to the Industrial Engineering Department. Incidentally, I understand there are several Tech men here. I met Manny Markowitz who is in the production engineering department. Also, I believe Karl den Tex and John Clegg are working in one of the labs. My wife, Irene, and I find this country living a refreshing contrast to ye olde Boston. An ever urgent plea: Let's Hear From You! — STANLEY J. MARCEWICZ, *Secretary*, Route 2, Highland, N.Y.

• 1952 •

It is with the deepest regret and sorrow that I have to announce the death of Walt Harmon on July 28 in Dover, Del. Walt, who was assistant to the vice-president of International Latex Corporation, passed away after a very short illness. While at Tech, Walt was active in Tau Beta Pi, Kappa Kappa Sigma, and Scabbard and Blade; he held the rank of colonel in the R.O.T.C.

The summertime was certainly the time when the Class's fancies turned to love; more and more of us bit the matrimonial dust. Others in the Class who had previously committed themselves have made a

new sub-division of this column, which shall be called "Dividends" for lack of a better name.

Hitchings: Barbara Borton, of Newark, N.J., and Ron Best, of Brooklyn, N.Y., were married on April 11 in Newark, N.J. The newlyweds (by now, veterans) are living in Orange, N.J. — Janice Levine, of Lewiston, Me., and Merwin Blum, of Compton, Calif., and Organic Lab, exchanged vows September 8 at San Antonio, Texas. It seems that Merwin is now a lieutenant in the Air Force, but the *Boston Herald* says that he and his bride will live in Denver, Colo., where Mervin "will attend the University." This is the Air Force??

Another Air Force Lieutenant, Don Chapman, of Charlestown, N.H., was wed to Barbara Grainger, of Hingham, Mass., on June 14 in Hingham. Air Force plans will put Don and Barbara in Germany for a while — Mike Chivers (the *Waltham News-Tribune* calls him Arthur Sanford), Belmont, Mass., was married to Nancy Horne, of Newton, Mass., on May 23 in Newton. Mike and his Missus are now living in Newton Centre; Mike is a sales engineer for Barry Shock Absorber Company.

On September 6 in Washington, Pa., Marcelle (Wellesley) Stargardt pinned Joe Davidson down long enough for him to say "I do." I have no idea where the couple are now living or where Joe is working (that is, if he is working). Dorothy Nash, of Wrentham, Mass., and John Dowding, of Westwood, Mass., were married on June 20 in Wrentham. John and Barbara are now living in Latrobe, Pa., where John is a metallurgical engineer with Latrobe Steel Company.

Nancy Angell and Dick DuBois, both of Randolph, Mass., exchanged rings on August 1 in Randolph. Dick is now a research assistant in hydraulic engineering at the Institute; he and his bride are now residing in Cambridge. Vera Bell, a Simmons graduate from Marblehead, Mass., was married to Bob Ehlert, of Cleveland Heights, Ohio. Bob and Vera are now living in Norfolk, Va.; Bob is an ensign in the Navy. — Jeanne Merrick, of Amesbury, Mass., and Bob Elliott, of Northwood Ridge, N.H., were married in Amesbury on March 28. (Better late than never with the news.) Bob is a "second john" in the Quartermaster Corps and is now in Korea.

Camille Roberto, of Medford, Mass., was wed to Carl Farrington, of Minneapolis, Minn., on June 27 in West Somerville, Mass. Carl has now added lieutenant before his name (Air Force); his location is unknown. — Mary Marshall, of Auburn, Me., and Larry Garthe, of Traverse City, Mich., entered into the sanctimonious state of matrimony on September 12 in Auburn. Larry and Mary are now living in Easton, Pa., where Larry is undoubtedly up to something. — Mary Moore, of Lawrence, Mass., became Mrs. Eric Halbach on June 18 in Andover, Mass. The couple are now living in Marysville, Calif.

Jean Weeks, of West Englewood, N.J., and Taj Hanna, of Miami, Fla., sighed their "I dos" in West Englewood on June 27. Taj and Jean are now living in Columbus, Ohio, where Taj is serving as an Air Force Lieutenant at Lockbourne Air Force Base. Helen Chagnot, of Milton,

Mass., and Bob Hawes, of Weymouth, Mass., were married in Milton on July 18. The Hawes are now living in Hingham, Mass. — Ruth Barclay and Jim Humphries were married on June 13. Jim who is an air force lieutenant was stationed at Keesler Air Force Base and was recently transferred to England and parts East.

Mary Frey, of Boston, Mass., was married on May 21 in Boston to Bob King. Bob is now on the staff of the School of Industrial Management at Tech; the Kings are residing in Boston. — Nancy Alperin, of Cambridge, Mass., hung her "Private Property" sign on Bob Lurie during the summertime sometime. Bob and Nancy are now residing in Westgate, while Bob is attending Tech Grad School for Chemical Engineering. — One of our doctorate graduates, Ken Moon, of Kitchener, Ontario, Canada, was married to Elizabeth Malone, of Auburndale, Mass., on April 13 in Auburndale. The Moons are now living in Chestnut Hill, Mass.

Betty Lou Morgan, of Birmingham, Mich., became Mrs. Jim Parker on June 27 in Royal Oak, Mich. The Parkers are now residing in Oak Park, Mich.; Jim is an architect with Harley, Ellington and Day, Detroit. — Our aging bachelor finally got done in. On July 29 in Dayton, Ohio, Gus Rath, of Buenos Aires, Argentina, was subdued by Clovia Poock, of Oxford, Ohio. Gustavo and his spouse are now residing in Dayton; Gus is a lieutenant in the Air Force at Wright-Patterson Air Force Base. The June 20 issue of the *Boston Globe* noted a honeymoon trip in Quebec of George Roller and Janice Rhodes, of Arlington, Mass. Nothing further is known about this couple.

Barbara Mannix, of Belmont, Mass., and Joe Uzdavinis, of nearby Norwood, were married on June 6 in Belmont. Joe is an air force lieutenant stationed at Keesler Air Force Base, Biloxi, Miss. — John Warner, of Sterling, Mass., took Anna Carlucio, of Leominster, Mass., to be his wife on August 5 in Leominster. The newlyweds are making their home in Hartford, Conn., while John is a mechanical engineer at the Hamilton Standard Division of United Aircraft in Windsor Locks, Conn.

Dividends: The Green Company (Mike and Lee) announced on June 19, 1953, the issue of their first dividend, a little girl named Frances Rose. — The Jamieson Corporation (Burge and Lib) released the news of their first dividend, a girl named Ellen, in the beginning of August. — The Laufs, Ltd. (Gerry and Anita) have also noted the arrival of a little girl during the summer, but I have misplaced the announcement stating her name and exact time of arrival. Many happy returns of the day to these and other newer combinations in restraint of trade.

Missing Persons Department: Wanted: Information on present location, occupation, and/or degree of marital servitude for each of the following: Robert B. Adams, Benjamin Agusta, Yaichi Aikawa, Henry J. Albert, Paul E. Aldrich, Stanley F. Alger, Jr., Joseph F. Alibrandi, Mrs. Malvina Allen, Bernard J. Alperin, Daniel T. Anderson, Howard C. Anderson, Rodolpho R. Andrade. — STANLEY I. BUCHIN, *Secretary*, 150 Tryon Avenue, Englewood, N.J.

Sitting here on my bunk in a B.O.Q. at Fort Belvoir, I find the task of organizing the recent happenings in the lives of my former classmates a rather pleasant diversion from Army life. Along with Doug Meyer and Jul Greenebaum, I have seen quite a bit of Fort Belvoir this summer, what with six weeks of summer camp and orders to report for active duty on September 1. Here with us in earlier classes of the Engineer Officers' basic course are Ralph Sievers and Gene Richter. Many of you have evidently taken this business of June and summer weddings fairly seriously. Arthur Buckley was married on the Sunday after graduation to Lorraine Tierney, a graduate of Pierce Secretarial School. Art and Lorraine honeymooned in Maine, and then settled in Philadelphia where Art will work for Westinghouse. Peter Noonan and Gerald Langelier were active at Joseph Cartwright's marriage. As reported in an earlier issue Joe was married to Marion Lorraine Nihan, a graduate of Chandler School for Women.

As most of you who attended the graduation luncheon know, Mandy Manderson has returned to Navy life with a most attractive marital companion, the former Anne Chase. Anne is a graduate of Smith College, the name of which recalls to my mind a couple of week end fiascos endured by the boys at the Delt House. Ben Sack was another man married before graduation to Naomi Glazier who graduated from Brandeis this June. Among the other summer marriages were those of Marshal Merriam to Jane Paula Gates, Bob Stelow to Constance Faith Azoff, and Arye Grozbord to Florence Rosenberg. Marshal is a second lieutenant at Fort Devens, and Bob and Constance are continuing their studies at the University of Illinois.

A look at the beaver board walls of this cubicle and my roommate on his bunk in his shorts prompts me to let the joys of marital life drop for a time while I go on to some of the activities of my fellow bachelors. I received a soul-satisfying letter from Charlie Homsy who spent the summer at the Chemical Engineering Practice School and will return to the Institute in the fall to study for his doctorate exams. Berni Kelly also found time to compose a couple of letters. Berni is working for the city of Chicago as a sanitary engineer. Berni also reported that Mike Stanfield spent the summer at the Chemical Engineering Practice School. Ralph Anglin is working for Lehigh Portland Cement at present.

Two other members of our Class have become friendly competitors in the tire and rubber industry; Richard Cieslukiewicz at U. S. Rubber Company, and Earl Mitchell at Firestone Tire and Rubber Company. Another chemical engineer, Roy Sjogren is working in the research and development department of the Atlantic Refining Company in Philadelphia.

Because of the recent changes in Air Force policies, I hesitate to put much faith in newspaper items that certain of our colleagues were planning to report to Wright Patterson in mid-July. I do have definite information on another of our engineers. Second Lieutenant Oliver Gilbert

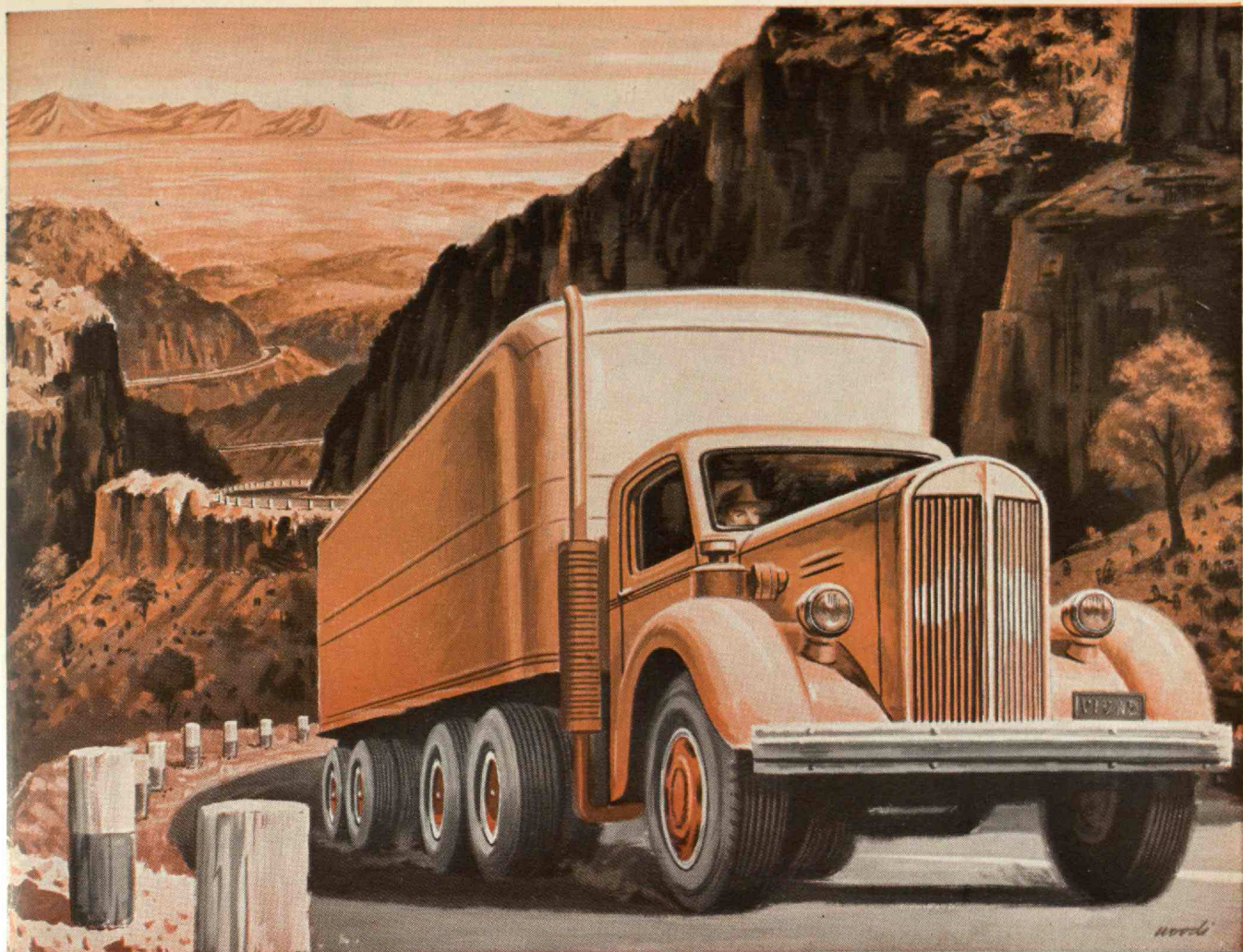
was assigned to the 561st Engineer Construction Company at Fort Dix. I have heard nothing from Walt Duffin since our stay at summer camp; I believe he planned to go back to Tech for graduate work.

Ken Foster, after a visit to Germany, is now studying at the Harvard Business School. Continued studies in chemistry beckoned Clive Greenough and Joe Casanova back to school this fall. Clive received a National Science Foundation Fellowship at Cal Tech, while Joe is at Carnegie Tech. Joe was also engaged to Natalie Gedrim, a graduate of Virginia Intermont College. Other men who have returned to the Institute for advanced study included Leonard Menice, Robert

Veo, Stan Silverman, Alan Rosenfield, and Howard Wing. Alan received a one-year fellowship to work on his master's degree, while Howard has a position with the electronics research laboratory.

I have a few more notes, concerning men who have found work in industry, that I would like to incorporate into this article before I begin studying for tomorrow's quiz. Richard Valenti is with the Radio Corporation of America at their New Jersey plant; Robert Rivers is a development engineer at the General Electronic Laboratory in Boston, while the Pennsylvania Railroad has acquired the services of Burton Williams. John Marshall is now in the sovereign state of Texas at Convair Aircraft. Robert Curley and Wilson Hen-

derson are still in Massachusetts. Bob, with the executive training program at Raytheon Corporation, and Wilson is a civil engineer with the firm of Daniel O'Connor and Son of Holyoke. The only thing that Mike Dyer's trip to Milwaukee to work at Allis Chalmers recalls to my mind is the fact that I used to be able to buy Miller's Highlife for a quarter a bottle while at school in Wisconsin. I stopped drinking it when I came east. "C'est fine." Now that summer vacations (I trust that you all enjoyed yours) have drawn to a close, I will be looking for notes, and comments, or suggestions. Please send them to my home address. Thank you. — VINSON W. BRONSON, JR., *Secretary*, 33 Wooster Heights, Danbury, Conn.



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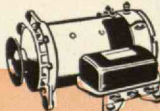
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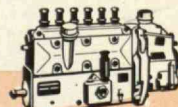
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Aircraft Engines



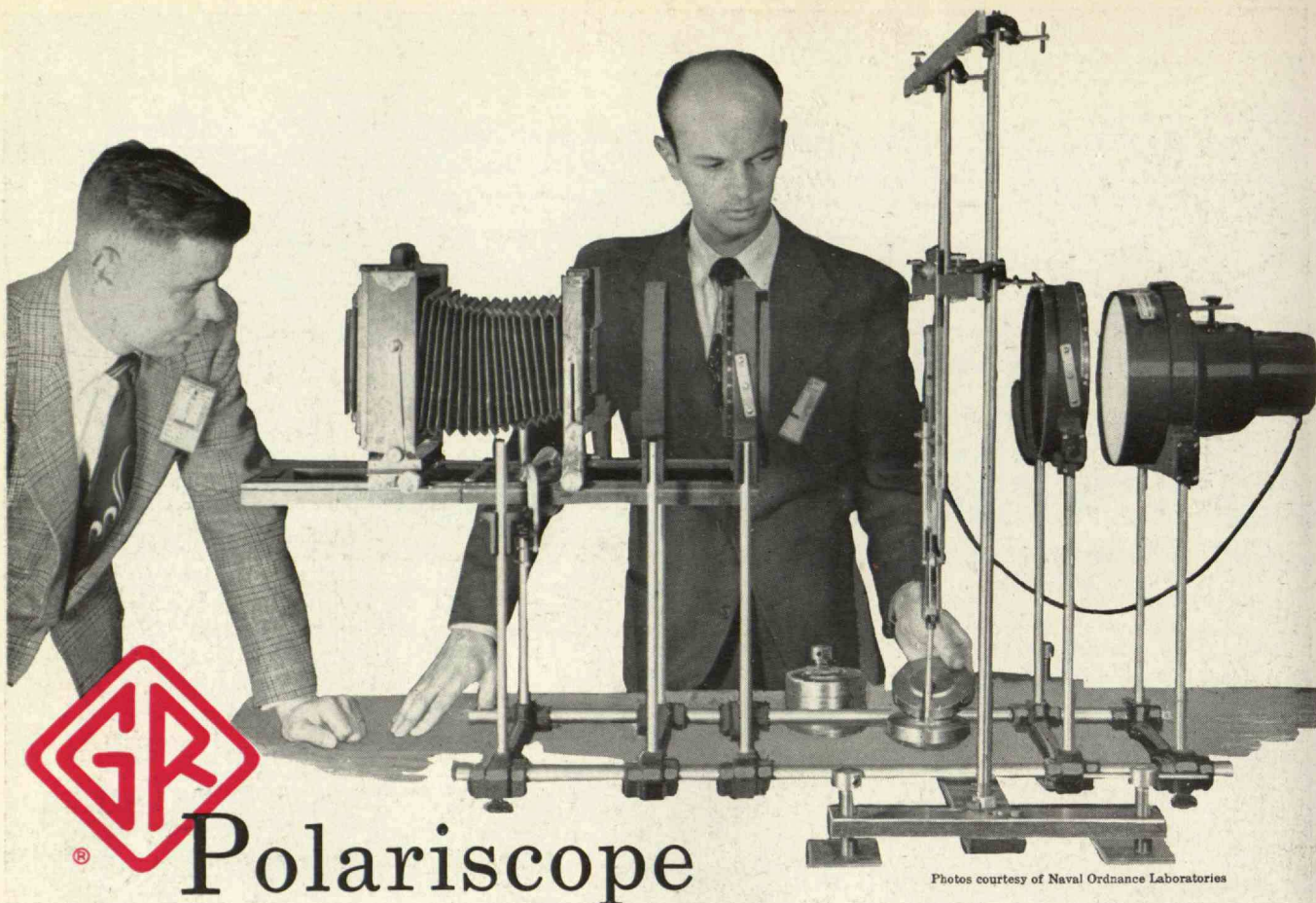
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The G-R Type 1534-A Polariscope reveals stresses in transparent, photoelastic models when they are observed under a steady polarized light. With high-intensity, short-duration flash illumination such as supplied by the G-R Type 1532-B Strobolume, dynamic stresses can be photographed as well. Both methods have been successfully applied by the Aeroballistics Design and Operations Division of the Naval Ordnance Laboratory to problems associated with supersonic wind-tunnel balances.



Finger points to location of axial-force balance section in supersonic model.

Wind-Tunnel balances are inserted internally in models to be placed in controlled airstreams. Electrical strain gages are cemented to sections of the balance structure so that acting aerodynamic forces and moments may be measured. A primary problem in obtaining accurate measurements lies in properly designing the balance structure. Another difficulty is the exact locating of strain gages on the balance so that all six force and moment components will be accurately indicated without mutual interaction among components.

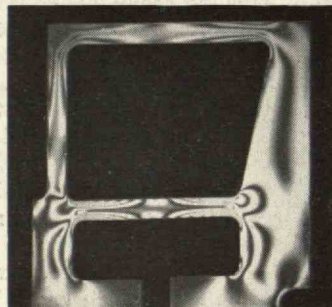
Before the development of the photoelastic technique, both problems had to a large extent been handled empirically. Optimum balance design and gage placement are too complex for ordinary analytical stress studies. The Polariscope now enables accurate visual or photographic investigations which have considerably simplified design and measurements.

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Stress distribution of plastic axial-force section under simulated air load applied by the Polariscope straining members. Photograph was taken with conventional camera equipment through the Polariscope.



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